

## **SUBCHAPTER B—TAKING, POSSESSION, TRANSPORTATION, SALE, PURCHASE, BARTER, EXPORTATION, AND IMPORTATION OF WILDLIFE AND PLANTS (CONTINUED)**

### **PART 17—ENDANGERED AND THREATENED WILDLIFE AND PLANTS (CONTINUED)**

#### **Subpart I—Interagency Cooperation (Continued)**

Sec.

17.99 Critical habitat; plants on the islands of Kauai, Niihau, Molokai, Maui, Kahoolawe, Oahu, and Hawaii, HI, and on the Northwestern Hawaiian Islands. (Continued)

#### **Subpart J—Manatee Protection Areas**

- 17.100 Purpose.
- 17.101 Scope.
- 17.102 Definitions.
- 17.103 Establishment of protection areas.
- 17.104 Prohibitions.
- 17.105 Permits and exceptions.
- 17.106 Emergency establishment of protection areas.
- 17.107 Facilitating enforcement.
- 17.108 List of designated manatee protection areas.

AUTHORITY: 16 U.S.C. 1361–1407; 16 U.S.C. 1531–1544; 16 U.S.C. 4201–4245; Pub. L. 99–625, 100 Stat. 3500; unless otherwise noted.

SOURCE: 40 FR 44415, Sept. 26, 1975, unless otherwise noted.

#### **Subpart I—Interagency Cooperation (Continued)**

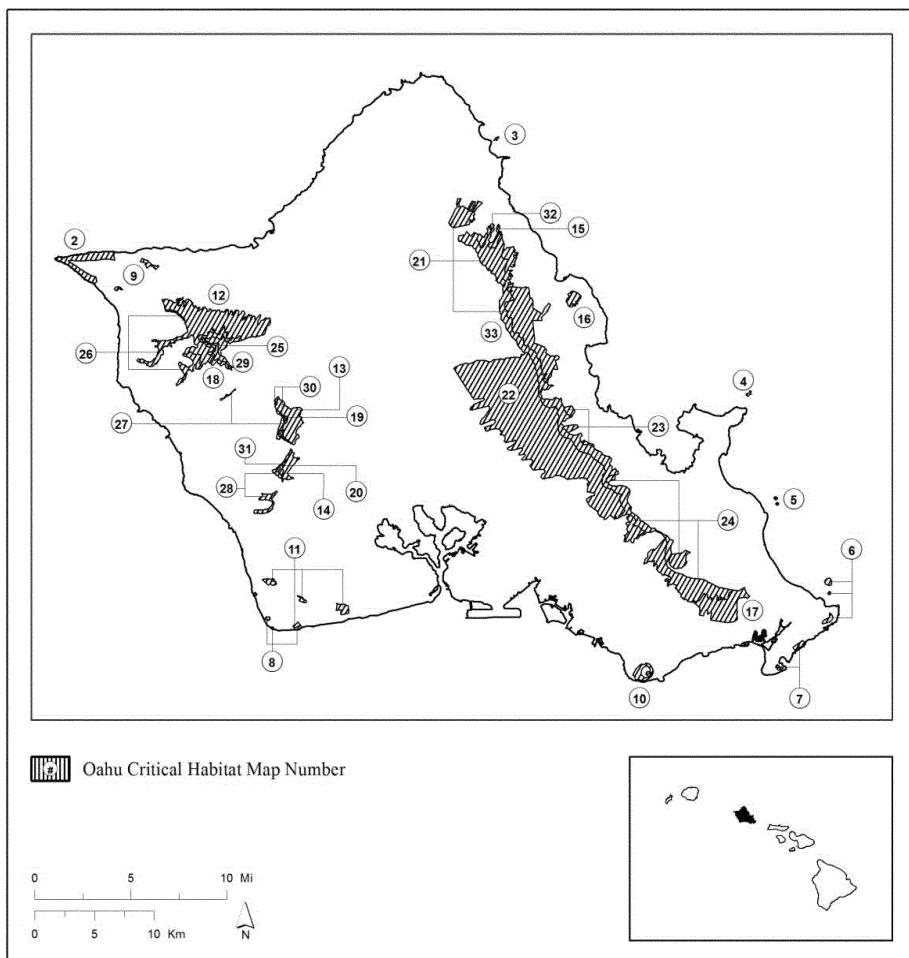
EDITORIAL NOTE: Paragraphs (a)–(h) of §17.99 appear in 50 Part 17, §§17.99(a) to 17.99(h).

**§ 17.99 Critical habitat; plants on the islands of Kauai, Niihau, Molokai, Maui, Kahoolawe, Oahu, and Hawaii, HI, and on the Northwestern Hawaiian Islands. (Continued)**

(i) *Oahu*. Critical habitat units are described below. Maps were created in GIS, with coordinates in UTM Zone 4 with units in meters using North American Datum of 1983 (NAD83). The maps in this entry, as modified by any accompanying regulatory text, establish the boundaries of the critical habitat designation. The coordinates or plot points or both on which each map is based are available to the public at the Service's Internet site, <http://www.fws.gov/pacificislands>; at <http://www.regulations.gov> at Docket No. FWS-R1-ES-2010-0043; and at the field office responsible for the designation. You may obtain field office location information by contacting one of the Service regional offices, the addresses of which are listed at 50 CFR 2.2. Existing manmade features and structures, such as buildings, roads, railroads, airports, runways, other paved areas, lawns, and other urban landscaped areas, existing trails, campgrounds and their immediate surrounding landscaped area, scenic lookouts, remote helicopter landing sites, and existing fences are not included in the critical habitat designation. Federal actions limited to those areas, therefore, would not trigger a consultation under section 7 of the Act unless they may affect the species or physical or biological features in adjacent critical habitat.

(1) Map 1—Index map follows:

**Map 1**  
**Oahu Critical Habitat—Island Index Map**



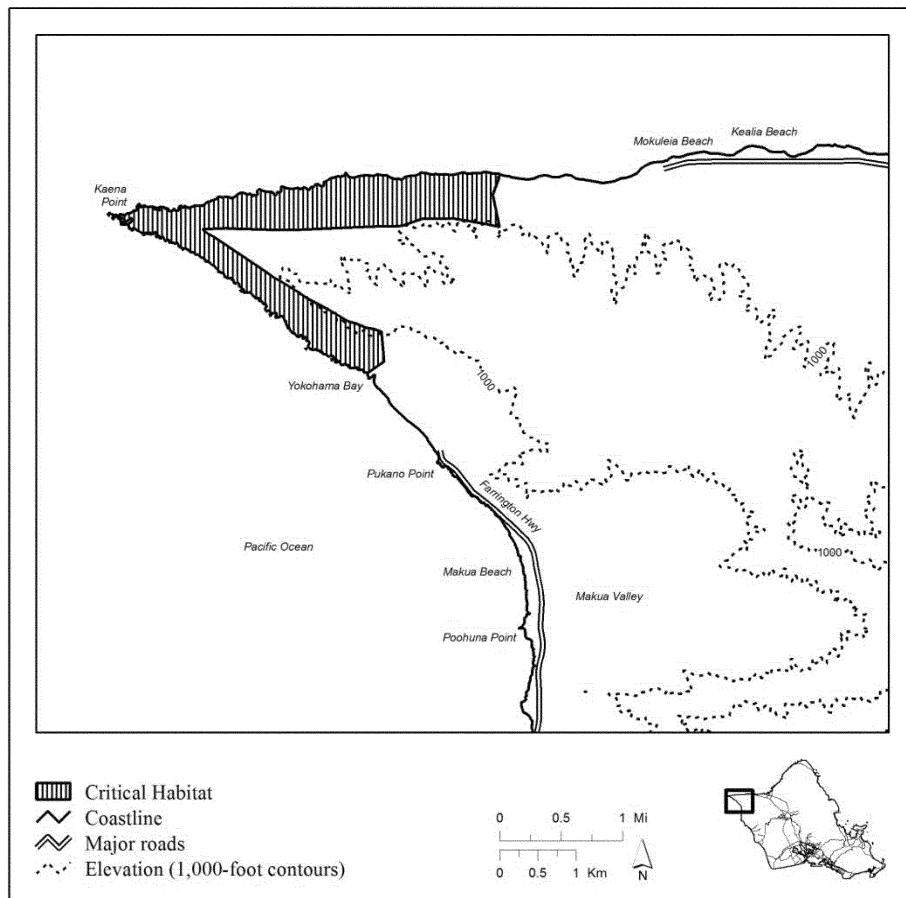
(2) Oahu—Coastal—Unit 1 (958 ac; 388 ha).

(i) This unit is critical habitat for *Achyranthes splendens* var. *rotundata*, *Bidens amplectens*, *Centaurium*

*sebaeoides*, *Chamaesyce celastroides* var. *kaenana*, *Schiedea kealiae*, *Sesbania tomentosa*, and *Vigna o-wahuensis*.

(ii) Map of Oahu—Coastal—Unit 1 (Map 2) follows:

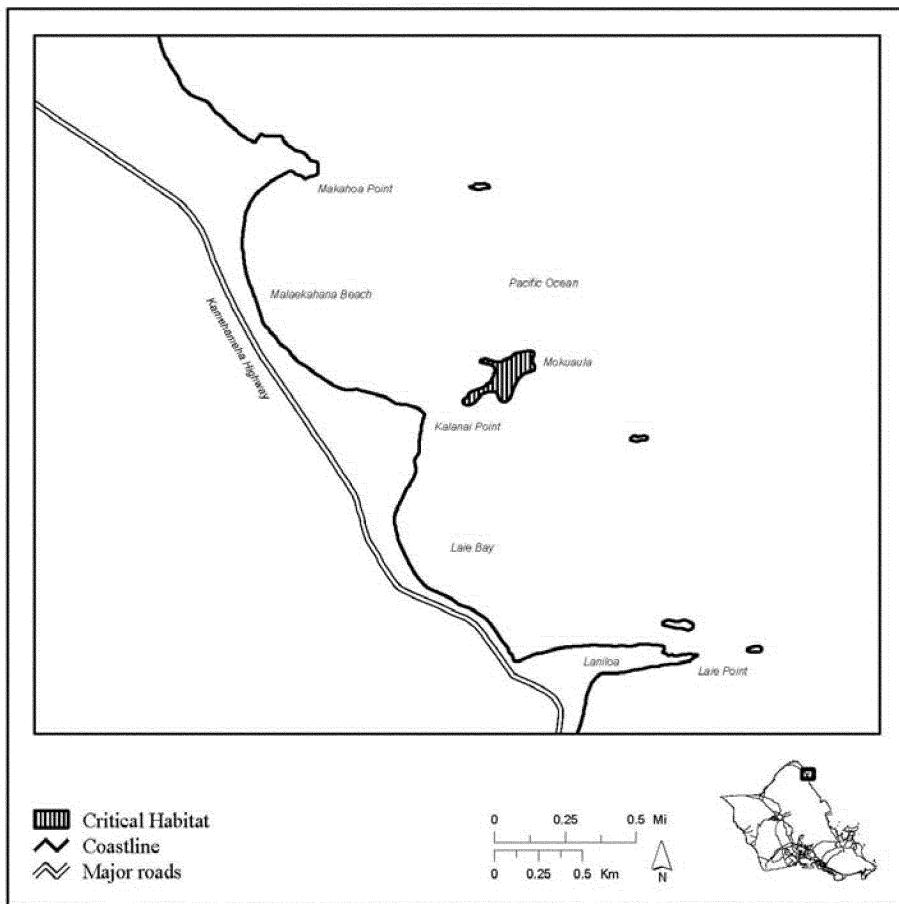
**Map 2**  
**Oahu—Coastal**  
**Unit 1**



(3) Oahu—Coastal—Unit 2 (12 ac; 5 ha). *kuwaleana*, *Sesbania tomentosa*, and *Vigna o-wahuensis*.

(i) This unit is critical habitat for *Centaurium sebaeoides*, *Chamaesyce* (ii) Map of Oahu—Coastal—Unit 2 (Map 3) follows:

**Map 3**  
**Oahu—Coastal**  
**Unit 2**



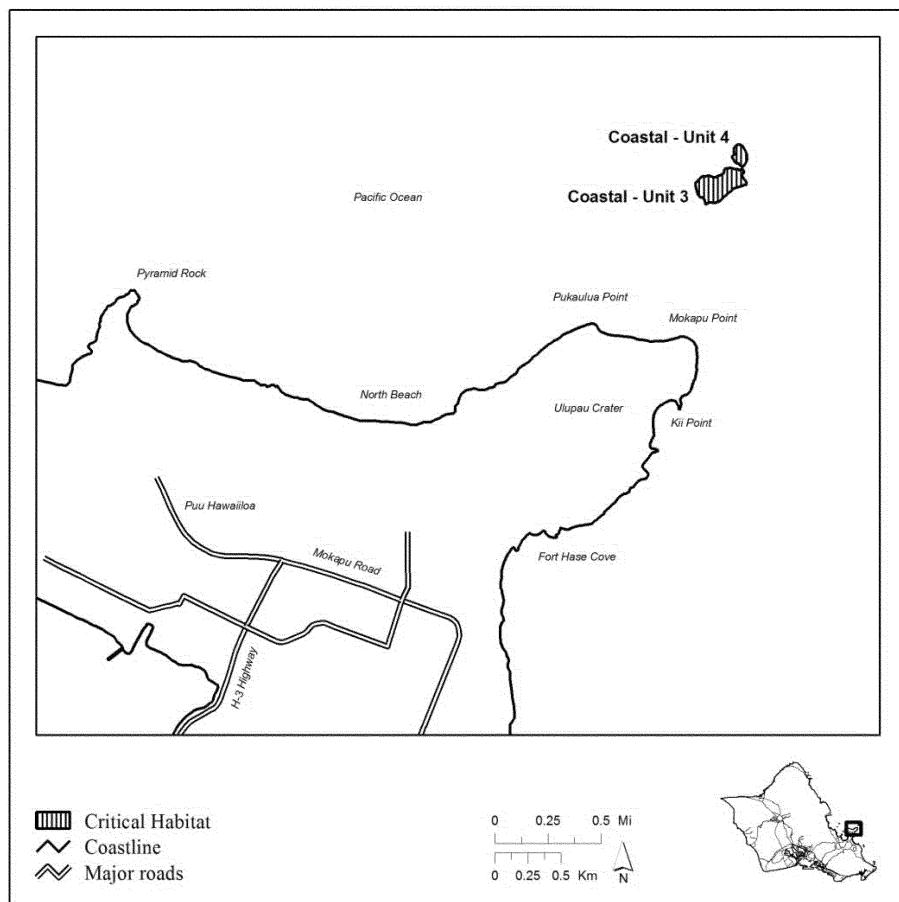
(4) Oahu—Coastal—Unit 3 (15 ac; 6 ha) and Oahu—Coastal—Unit 4 (3 ac; 1 ha).

(i) These units are critical habitat for *Centaurium sebaeoides*, *Chamaesyce*

*kuwaleana*, *Sesbania tomentosa*, and *Vigna o-wahuensis*.

(ii) Map of Oahu—Coastal—Unit 3 and Oahu—Coastal—Unit 4 (Map 4) follows:

**Map 4**  
**Oahu—Coastal Ecosystem**  
**Unit 3 and Unit 4**



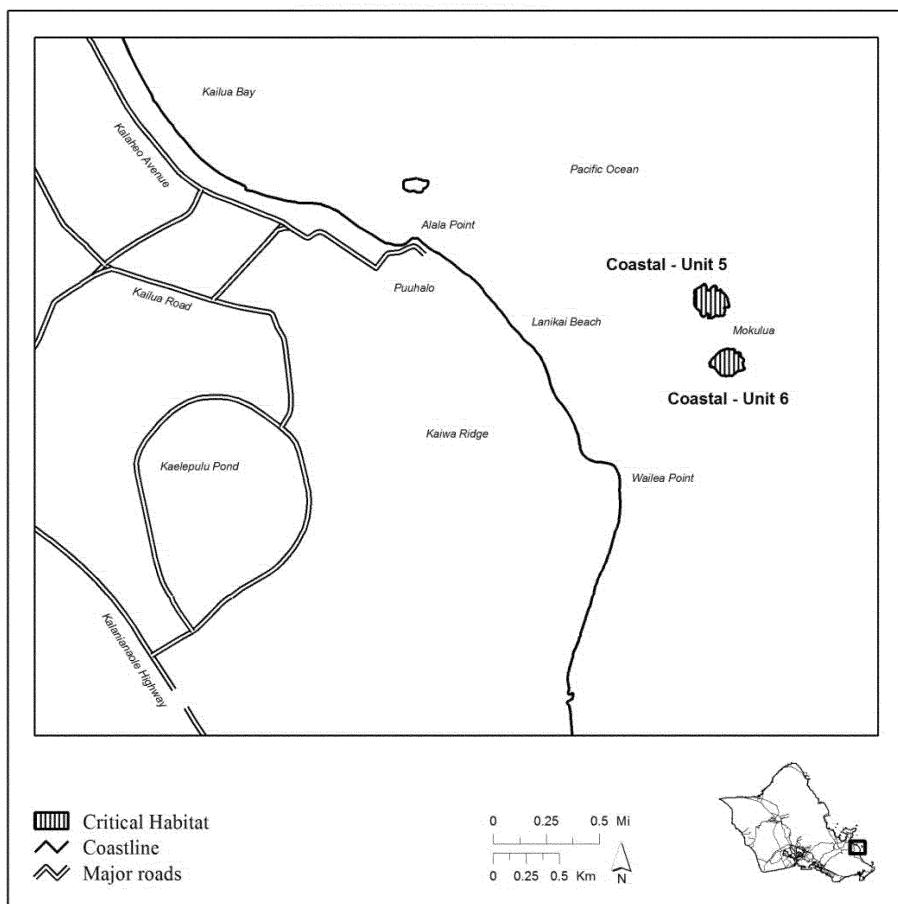
(5) Oahu—Coastal—Unit 5 (12 ac; 5 ha) and Oahu—Coastal—Unit 6 (9 ac; 4 ha).

(i) These units are critical habitat for *Centaurium sebaeoides*, *Chamaesyce*

*kuwaleana*, *Sesbania tomentosa*, and *Vigna o-wahuensis*.

(ii) Map of Oahu—Coastal—Unit 5 and Oahu—Coastal—Unit 6 (Map 5) follows:

**Map 5**  
**Oahu—Coastal**  
**Unit 5 and Unit 6**



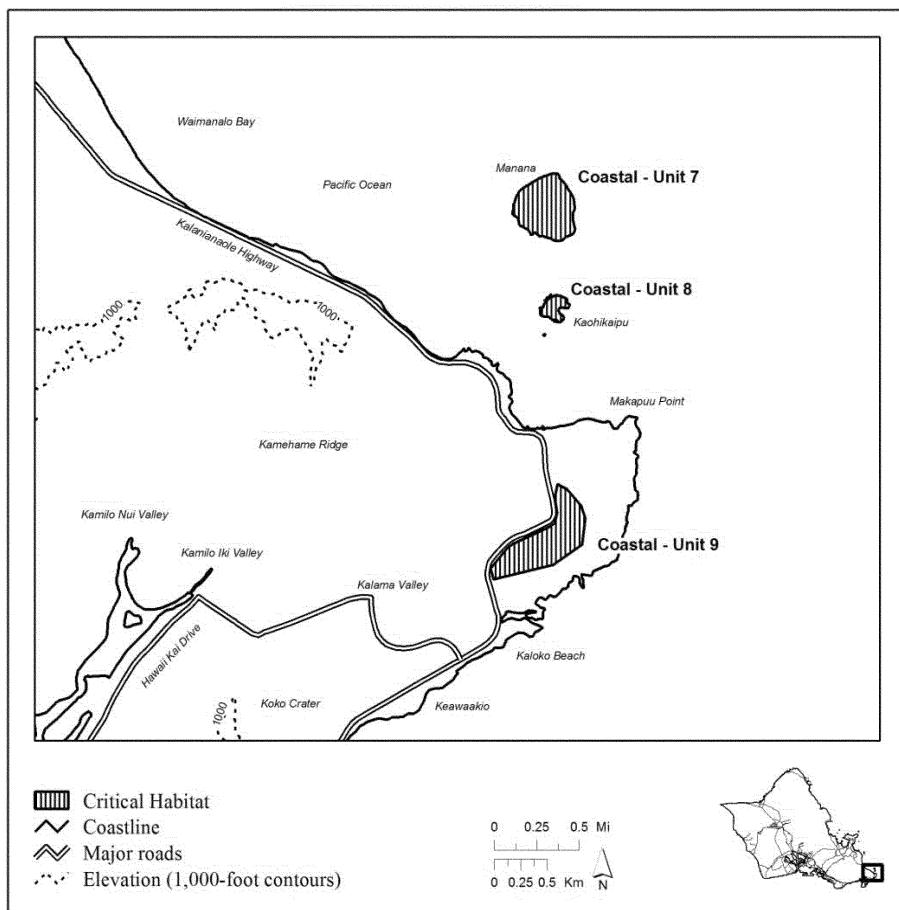
(6) Oahu—Coastal—Unit 7 (67 ac; 27 ha), Oahu—Coastal—Unit 8 (10 ac; 4 ha), and Oahu—Coastal—Unit 9 (80 ac; 33 ha).

(i) These units are critical habitat for, *Centaurium sebaeoides*, *Chamaesyce*

*kuwaleana*, *Sesbania tomentosa*, and *Vigna o-wahuensis*.

(ii) Map of Oahu—Coastal—Unit 7, Oahu—Coastal—Unit 8, and Oahu—Coastal—Unit 9 (Map 6) follows:

**Map 6**  
**Oahu—Coastal**  
**Unit 7, Unit 8 and Unit 9**



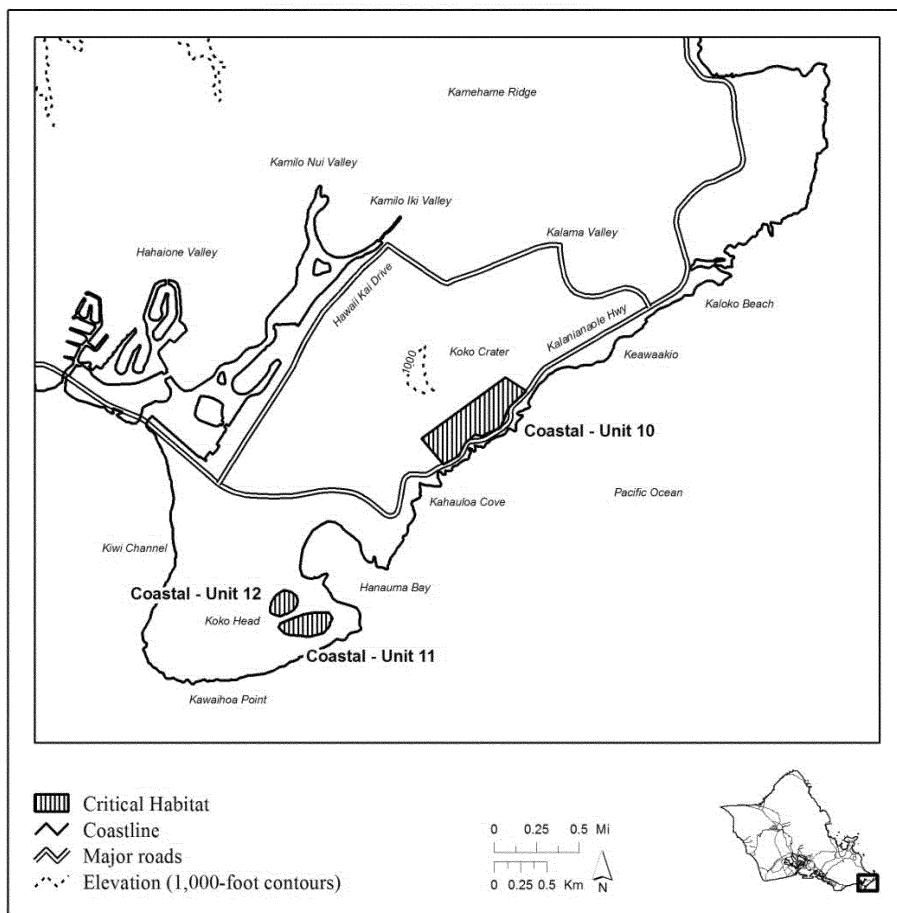
(7) Oahu—Coastal—Unit 10 (74 ac; 30 ha), Oahu—Coastal—Unit 11 (20 ac; 8 ha), and Oahu—Coastal—Unit 12 (11 ac; 5 ha).

(i) Oahu—Coastal—Unit 10 is critical habitat for *Centaurium sebaeoides*, *Chamaesyce kuwaleana*, *Sesbania tomentosa*, and *Vigna o-wahuensis*.

(ii) Oahu—Coastal—Unit 11 and Oahu—Coastal—Unit 12 are critical habitat for *Centaurium sebaeoides*, *Chamaesyce kuwaleana*, *Cyperus trachysanthos*, *Marsilea villosa*, *Sesbania tomentosa*, and *Vigna o-wahuensis*.

(iii) Map of Oahu—Coastal—Unit 10, Oahu—Coastal—Unit 11, and Oahu—Coastal—Unit 12 (Map 7) follows:

**Map 7**  
**Oahu-Coastal**  
**Unit 10, Unit 11 and Unit 12**



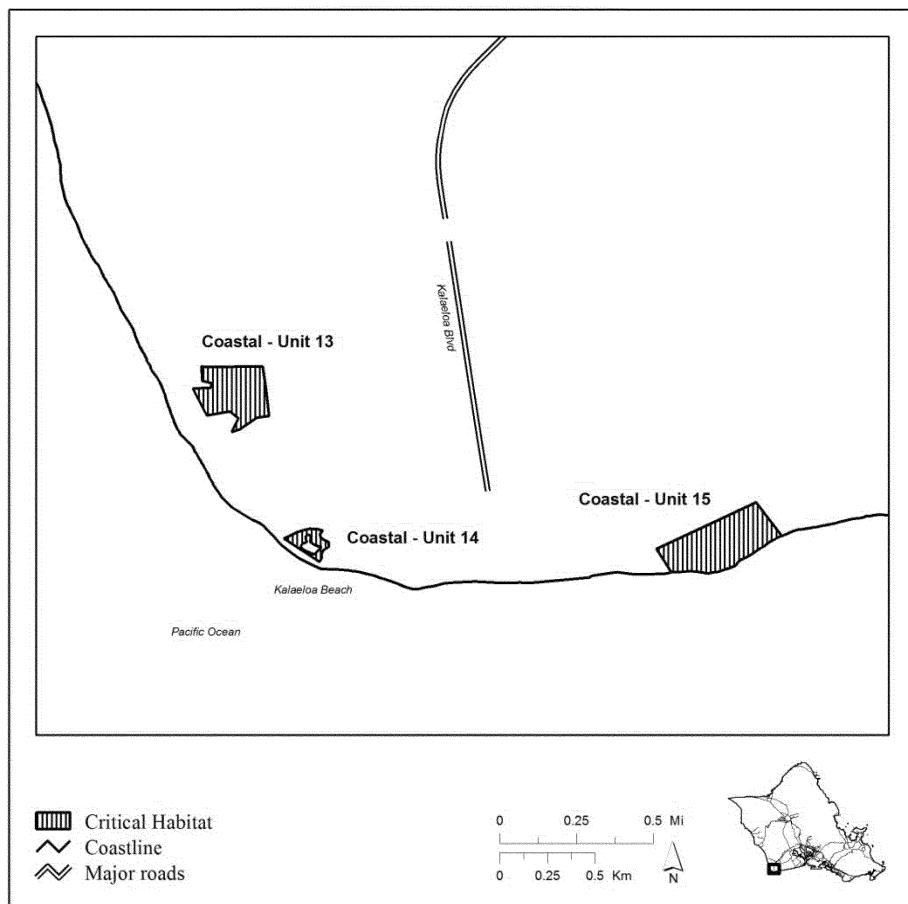
(8) Oahu—Coastal—Unit 13 (23 ac; 10 ha), Oahu—Coastal—Unit 14 (4 ac; 2 ha), and Oahu—Coastal—Unit 15 (33 ac; 13 ha).

(i) These units are critical habitat for *Achyranthes splendens* var. *rotundata*, *Bidens amplectens*, *Centaurium*

*sebaeoides*, *Chamaesyce celastroides* var. *kaenana*, *Schiedea kealiae*, *Sesbania tomentosa*, and *Vigna o-wahuensis*.

(ii) Map of Oahu—Coastal—Unit 13, Oahu—Coastal—Unit 14, and Oahu—Coastal—Unit 15 (Map 8) follows:

**Map 8**  
**Oahu—Coastal**  
**Unit 13, Unit 14 and Unit 15**



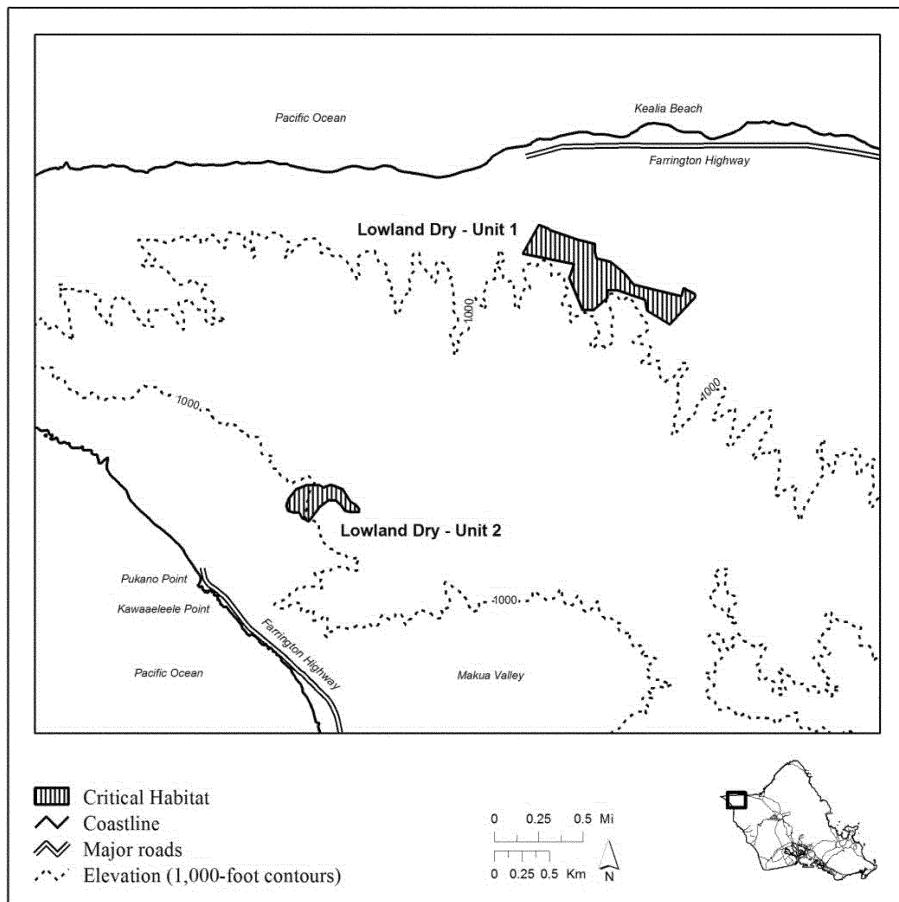
(9) Oahu—Lowland Dry—Unit 1 (102 ac; 41 ha) and Oahu—Lowland Dry—Unit 2 (29 ac; 12).

(i) These units are critical habitat for *Achyranthes splendens* var. *rotundata*, *Bidens amplexans*, *Bonamia menziesii*, *Chamaesyce celastroides* var. *kaenana*, *Euphorbia haeeleleana*, *Gouania meyenii*, *Gouania vitifolia*, *Hibiscus brackenridgei*,

*Isodendrion pyrifolium*, *Melanthera tenuifolia*, *Neraudia angulata*, *Nototrichium humile*, *Pleomele forbesii*, *Schiedea hookeri*, *Schiedea kealiae*, and *Spermolepis hawaiiensis*.

(ii) Map of Oahu—Lowland Dry—Unit 1 and Oahu—Lowland Dry—Unit 2 (Map 9) follows:

**Map 9**  
**Oahu—Lowland Dry**  
**Unit 1 and Unit 2**



(10) [Reserved]

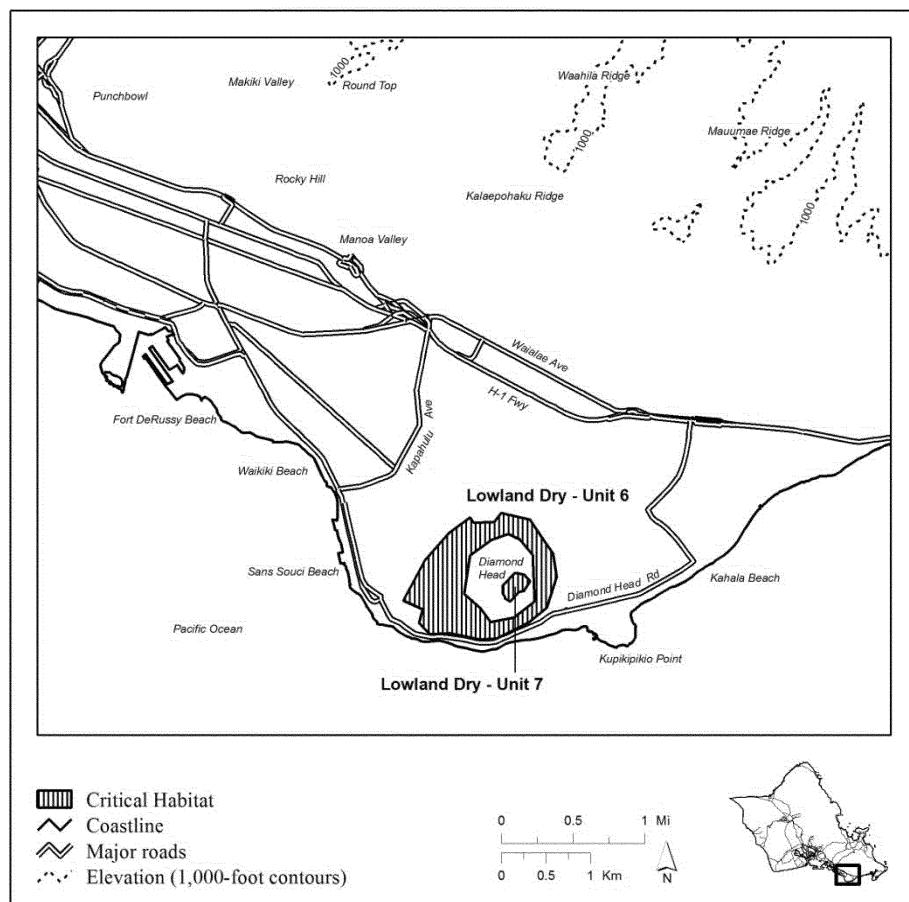
(11) Oahu—Lowland Dry—Unit 6 (287 ac; 116 ha) and Oahu—Lowland Dry—Unit 7 (15 ac; 6 ha).

(i) Oahu—Lowland Dry—Unit 6 is critical habitat for *Doryopteris takeuchii*, *Gouania meyenii*, and *Spermolepis hawaiiensis*.

(ii) Oahu—Lowland Dry—Unit 7 is critical habitat for *Cyperus trachysanthos*, *Doryopteris takeuchii*, *Gouania meyenii*, *Marsilea villosa*, and *Spermolepis hawaiiensis*.

(iii) Map of Oahu—Lowland Dry—Unit 6 and Oahu—Lowland Dry—Unit 7 (Map 10) follows:

**Map 10**  
**Oahu—Lowland Dry**  
**Unit 6 and Unit 7**



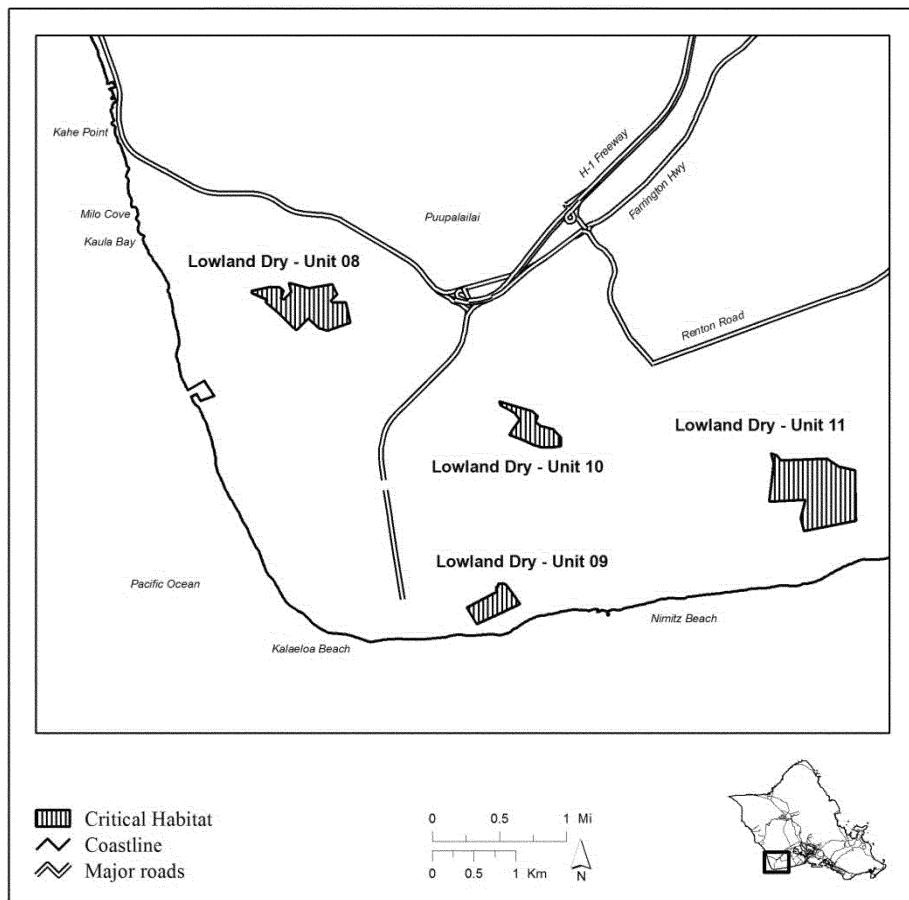
(12) Oahu—Lowland Dry—Unit 8 (99 ac; 40 ha), Oahu—Lowland Dry—Unit 9 (37 ac; 15 ha), Oahu—Lowland Dry—Unit 10 (43 ac; 17 ha), and Oahu—Lowland Dry—Unit 11 (166 ac; 67 ha).

(i) These units are critical habitat for *Achyranthes splendens* var. *rotundata*, *Bidens amplectens*, *Bonamia menziesii*, *Chamaesyce celastroides* var. *kaenana*, *Chamaesyce skottsbergii* var. *skottsbergii*, *Euphorbia haeleeleana*, *Gouania meyenii*,

*Gouania vitifolia*, *Hibiscus brackenridgei*, *Isodendrion pyrifolium*, *Melanthera tenuifolia*, *Neraudia angulata*, *Nototrichium humile*, *Schiedea hookeri*, *Schiedea kealiae*, and *Spermolepis hawaiiensis*.

(ii) Map of Oahu—Lowland Dry—Unit 8, Oahu—Lowland Dry—Unit 9, Oahu—Lowland Dry—Unit 10, and Oahu—Lowland Dry—Unit 11 (Map 11) follows:

**Map 11**  
**Oahu—Lowland Dry**  
**Unit 8, Unit 9, Unit 10 and Unit 11**



(13) Oahu—Lowland Mesic—Unit 1 (4,448 ac; 1,800 ha).

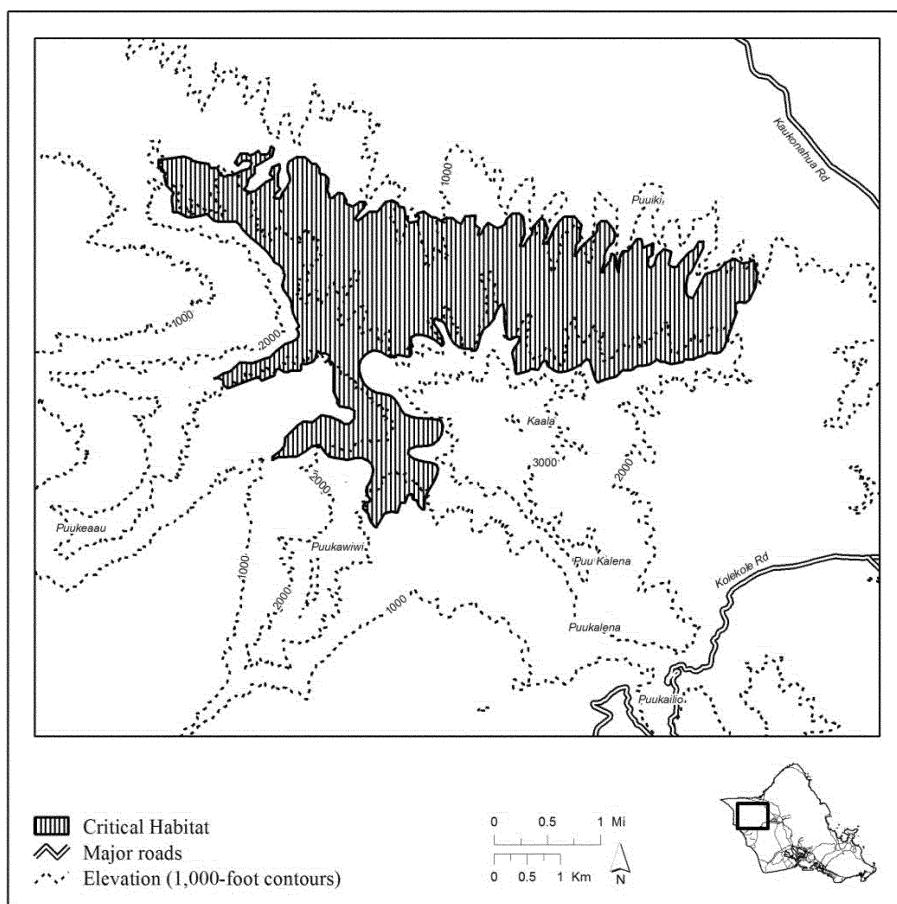
(i) This unit is critical habitat for *Abutilon sandwicense*, *Alectryon macrococcus*, *Bonamia menziesii*, *Cenchrus agrimonoides*, *Chamaesyce celastroides* var. *kaenana*, *Chamaesyce herbstii*, *Colubrina oppositifolia*, *Ctenitis squamigera*, *Cyanea acuminata*, *Cyanea calycina*, *Cyanea grimesiana* ssp. *grimesiana*, *Cyanea grimesiana* ssp. *obatae*, *Cyanea longiflora*, *Cyanea pinnatifida*, *Cyanea superba*, *Cyperus*

*pennatifloris*, *Cyrtandra dentata*, *Delissea subcordata*, *Diellia falcata*, *Diellia unisora*, *Diplazium molokaiense*, *Dubaussia herbstobatae*, *Eragrostis fosbergii*, *Eugenia koolauensis*, *Euphorbia haeleeleana*, *Flueggea neowawraea*, *Gardenia mannii*, *Gouania meyenii*, *Gouania vitifolia*, *Hesperomannia arborescens*, *Hesperomannia arbuscula*, *Hibiscus brackenridgei*, *Isodendrion laurifolium*, *Isodendrion longifolium*, *Kadua coriacea*, *Kadua degeneri*, *Kadua parvula*, *Labordia cyrtandrae*, *Lobelia niihauensis*,

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*Melanthera tenuifolia*, *Melicope makahae*, *Melicope pallida*, *Melicope saint-johnii*, *Neraudia angulata*, *Nototrichium humile*, *Phyllostegia hirsuta*, *Phyllostegia kaalaensis*, *Phyllostegia mollis*, *Phyllostegia parviflora* var. *lydgatei*, *Plantago princeps* var. *princeps*, *Platydesma cornuta* var. *decurrens*, *Pleomele forbesii*, *Pteralyxia macrocarpa*, *Sanicula mariversa*, *Schiedea hookeri*, *Schiedea kaalae*, *Schiedea nuttallii*, *Schiedea obovata*, *Silene perlmanii*, *Solanum sandwicense*, *Stenogyne kanehoana*, *Tetramolopium lepidotum* ssp. *lepidotum*, *Urera kaalae*, and *Viola chamissoniana* ssp. *chamissoniana*. Map of Oahu—Lowland Mesic—Unit 1 (Map 12) follows:

**Map 12**  
**Oahu—Lowland Mesic**  
**Unit 1**



(14) Oahu—Lowland Mesic—Unit 2 (1,063 ac; 430 ha).

(i) This unit is critical habitat for *Abutilon sandwicense*, *Alectryon*

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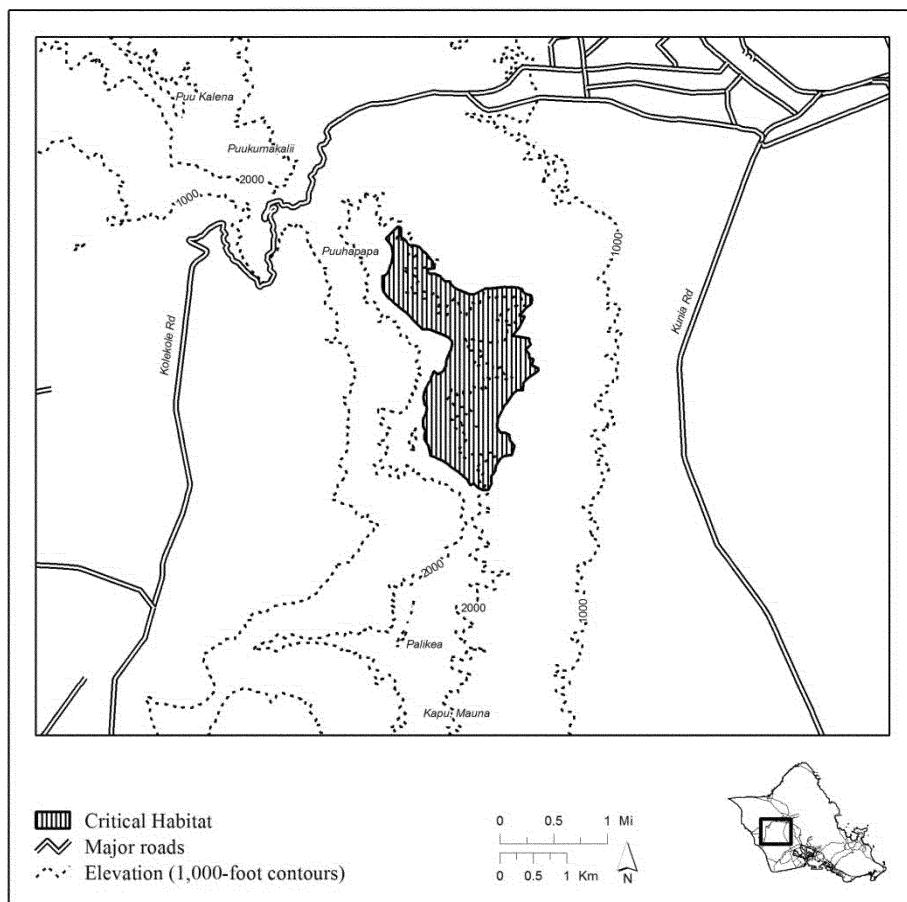
*macrococcus*, *Bonamia menziesii*, *Cenchrus agrimonoides*, *Chamaesyce celastroides* var. *kaenana*, *Chamaesyce herbstii*, *Colubrina oppositifolia*, *Ctenitis squamigera*, *Cyanea acuminata*, *Cyanea calycina*, *Cyanea grimesiana* ssp. *grimesiana*, *Cyanea grimesiana* ssp. *obatae*, *Cyanea longiflora*, *Cyanea pinnatifida*, *Cyanea superba*, *Cyperus pannatifloris*, *Cyrtandra dentata*, *Delissea subcordata*, *Diellia falcata*, *Diellia unisora*, *Diplazium molokaiense*, *Dubautia herbstobatae*, *Eragrostis fosbergii*, *Eugenia koolauensis*, *Euphorbia haeleeleana*, *Flueggea neowawraea*, *Gardenia mannii*, *Gouania meyenii*, *Gouania vitifolia*, *Hesperomannia arborescens*, *Hesperomannia arbuscula*, *Hibiscus brackenridgei*, *Isodendrion laurifolium*, *Isodendrion longifolium*, *Kadua coriacea*, *Kadua degeneri*, *Kadua parvula*,

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*Labordia cyrtandrae*, *Lobelia niihauensis*, *Melanthera tenuifolia*, *Melicope makahae*, *Melicope pallida*, *Melicope saint-johnii*, *Neraudia angulata*, *Nototrichium humile*, *Phyllostegia hirsuta*, *Phyllostegia kaalaensis*, *Phyllostegia mollis*, *Phyllostegia parvisflora* var. *lydgatei*, *Plantago princeps* var. *princeps*, *Platydesma cornuta* var. *decurrens*, *Pleomele forbesii*, *Pteralyxia macrocarpa*, *Sanicula mariversa*, *Schiedea hookeri*, *Schiedea kaalae*, *Schiedea nuttallii*, *Schiedea obovata*, *Silene perlmanii*, *Solanum sandwicense*, *Stenogyne kanehoana*, *Tetramolopium lepidotum* ssp. *lepidotum*, *Urena kaalae*, and *Viola chamissoniana* ssp. *chamissoniana*.

(ii) Map of Oahu—Lowland Mesic—Unit 2 (Map 13) follows:

**Map 13**  
**Oahu—Lowland Mesic**  
**Unit 2**



(15) Oahu—Lowland Mesic—Unit 3  
 (353 ac; 143 ha).

(i) This unit is critical habitat for *Abutilon sandwicense*, *Alectryon macrococcus*, *Bonamia menziesii*, *Cenchrus agrimonoides*, *Chamaesyce celastroides* var. *kaenana*, *Chamaesyce herbstii*, *Colubrina oppositifolia*, *Ctenitis squamigera*, *Cyanea acuminata*, *Cyanea calycina*, *Cyanea grimesiana* ssp. *grimesiana*, *Cyanea grimesiana* ssp. *obatae*, *Cyanea longiflora*, *Cyanea pinnatifida*, *Cyanea superba*, *Cyperus*

*pennatifloris*, *Cyrtandra dentata*, *Delissea subcordata*, *Diellia falcata*, *Diellia unisora*, *Diplazium molokaiense*, *Dubaussia herbstobatae*, *Eragrostis fosbergii*, *Eugenia koolauensis*, *Euphorbia haeleeleana*, *Flueggea neowawraea*, *Gardenia mannii*, *Gouania meyenii*, *Gouania vitifolia*, *Hesperomannia arborescens*, *Hesperomannia arbuscula*, *Hibiscus brackenridgei*, *Isodendrion longifolium*, *Kadua coriacea*, *Kadua degeneri*, *Kadua parvula*, *Labordia cyrtandrae*, *Lobelia niihauensis*, *Melanthera tenuifolia*,

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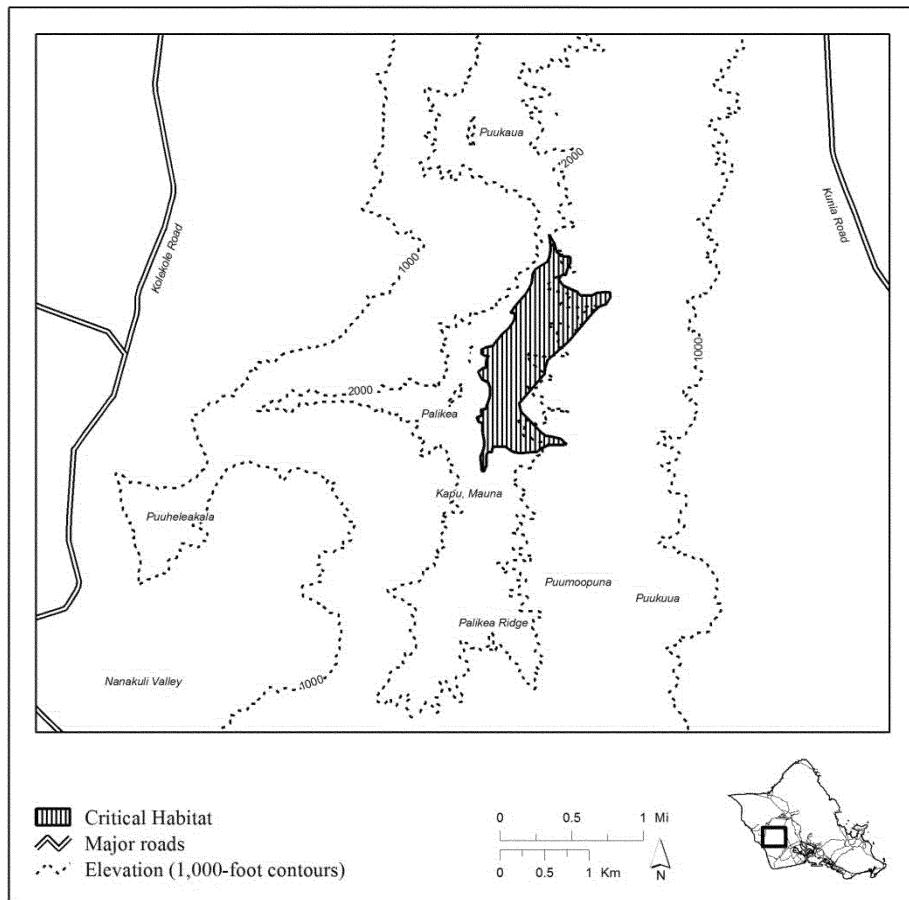
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*Melicope makahae, Melicope pallida, Melicope saint-johnii, Neraudia angulata, Nototrichium humile, Phyllostegia hirsuta, Phyllostegia kaalaensis, Phyllostegia mollis, Phyllostegia parviflora var. lydgatei, Plantago princeps var. princeps, Platydesma cornuta var. decurrens, Pleomele forbesii, Pteralyxia macrocarpa, Sanicula*

*mariversa, Schiedea hookeri, Schiedea kaalae, Schiedea nuttallii, Schiedea obovata, Silene perlmanii, Solanum sandwicense, Stenogyne kanehoana, Tetramolopium lepidotum ssp. lepidotum, Urera kaalae, and Viola chamissoniana ssp. chamissoniana.*

(ii) Map of Oahu—Lowland Mesic—Unit 3 (Map 14) follows:

**Map 14  
Oahu—Lowland Mesic  
Unit 3**



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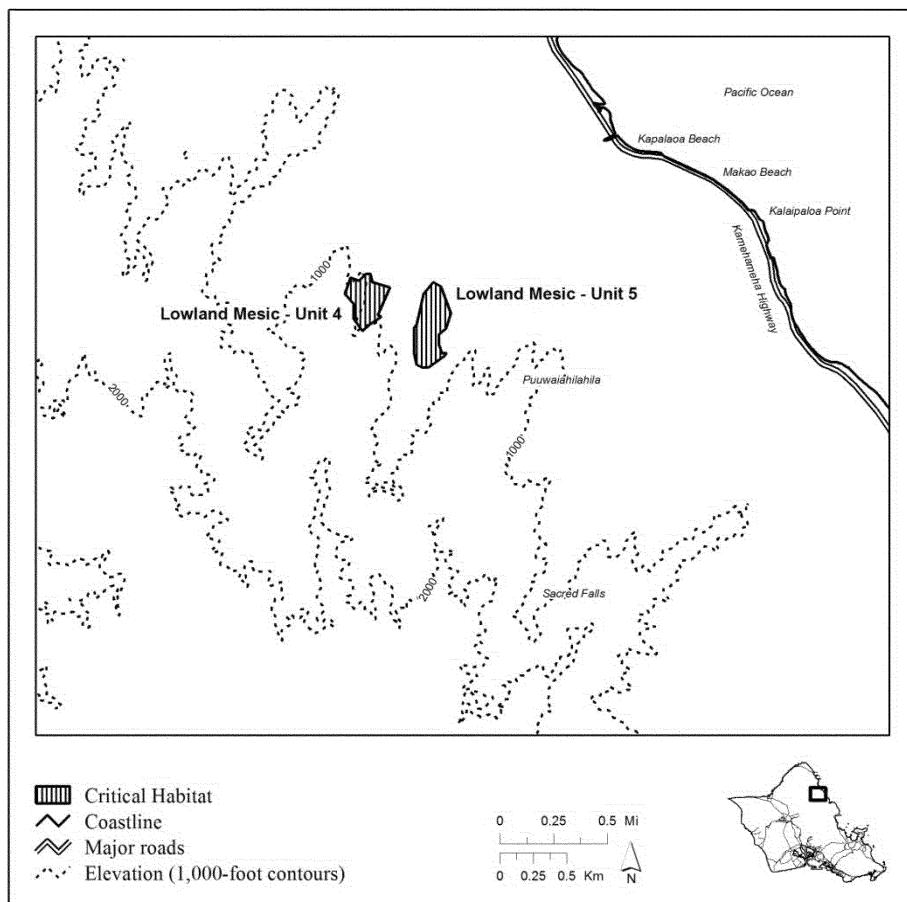
(16) Oahu—Lowland Mesic—Unit 4 (20 ac; 8 ha) and Oahu—Lowland Mesic—Unit 5 (29 ac; 12 ha).

(i) These units are critical habitat for *Alectryon macrococcus*, *Bonamia menziesii*, *Chamaesyce celastroides* var. *kaenana*, *Ctenitis squamigera*, *Cyanea acuminata*, *Cyanea calycina*, *Cyanea crispa*, *Cyanea grimesiana* ssp. *grimesiana*, *Cyanea lanceolata*, *Cyanea longiflora*, *Cyanea truncata*, *Cyrtandra dentata*, *Cyrtandra polyantha*, *Delissea subcordata*, *Diellia erecta*, *Diellia falcata*, *Eugenia koolauensis*, *Gardenia mannii*, *Hesperomannia arborescens*, *Isodendrion*

*laurifolium*, *Isodendrion longifolium*, *Kadua coriacea*, *Labordia cyrtandrae*, *Lobelia monostachya*, *Melicope lydgatei*, *Melicope saint-johnii*, *Phyllostegia hirsuta*, *Phyllostegia mollis*, *Phyllostegia parviflora* var. *parviflora*, *Plantago princeps* var. *princeps*, *Pleomele forbesii*, *Pteralyxia macrocarpa*, *Schiedea kaalae*, *Schiedea nuttallii*, *Solanum sandwicense*, *Tetraplasandra gymnocarpa*, and *Tetraplasandra lydgatei*.

(ii) Map of Oahu—Lowland Mesic—Unit 4 and Oahu—Lowland Mesic—Unit 5 (Map 15) follows:

**Map 15**  
**Oahu—Lowland Mesic**  
**Unit 4 and Unit 5**



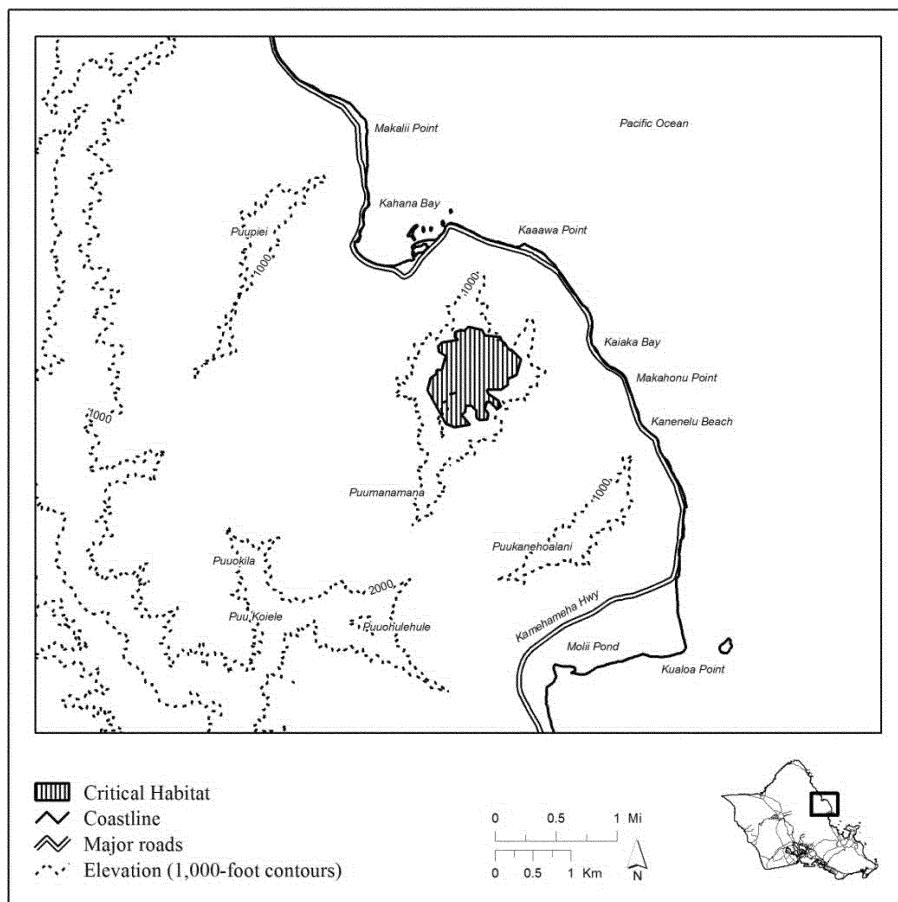
(17) Oahu—Lowland Mesic—Unit 6 (247 ac; 100 ha).

(i) This unit is critical habitat for *Alectryon macrococcus*, *Bonamia menziesii*, *Chamaesyce celastroides* var. *kaenana*, *Ctenitis squamigera*, *Cyanea acuminata*, *Cyanea calycina*, *Cyanea crispa*, *Cyanea grimesiana* ssp. *grimesiana*, *Cyanea lanceolata*, *Cyanea longiflora*, *Cyanea truncata*, *Cyrtandra dentata*, *Cyrtandra polyantha*, *Delissea subcordata*, *Diellia erecta*, *Diellia falcata*, *Eugenia koolauensis*, *Gardenia mannii*,

*Hesperomannia arborescens*, *Isodendrion laurifolium*, *Isodendrion longifolium*, *Kadua coriacea*, *Labordia cyrtandrae*, *Lobelia monostachya*, *Melicope lydgatei*, *Melicope saint-johnii*, *Phyllostegia hirsuta*, *Phyllostegia mollis*, *Phyllostegia parviflora* var. *parviflora*, *Plantago princeps* var. *princeps*, *Pleomele forbesii*, *Pteralyxia macrocarpa*, *Schiedea kaalae*, *Schiedea nuttallii*, *Solanum sandwicense*, *Tetraplasandra gymnocarpa*, and *Tetraplasandra lydgatei*.

(ii) Map of Oahu—Lowland Mesic—  
Unit 6 (Map 16) follows:

**Map 16**  
**Oahu—Lowland Mesic**  
**Unit 6**



(18) Oahu—Lowland Mesic—Unit 7 (1,669 ac; 676 ha).

(i) This unit is critical habitat for *Alectryon macrococcus*, *Bonamia menziesii*, *Chamaesyce celastroides* var. *kaenana*, *Ctenitis squamigera*, *Cyanea acuminata*, *Cyanea calycina*, *Cyanea crispa*, *Cyanea grimesiana* ssp. *grimesiana*, *Cyanea lanceolata*, *Cyanea*

*longiflora*, *Cyanea truncata*, *Cyrtandra dentata*, *Cyrtandra polyantha*, *Delissea subcordata*, *Diellia erecta*, *Diellia falcata*, *Eugenia koolauensis*, *Gardenia mannii*, *Hesperomannia arborescens*, *Isodendrion laurifolium*, *Isodendrion longifolium*, *Kadua coriacea*, *Labordia cyrtandrae*, *Lobelia monostachya*, *Melicope lydgatei*, *Melicope saint-johnii*, *Phyllostegia*

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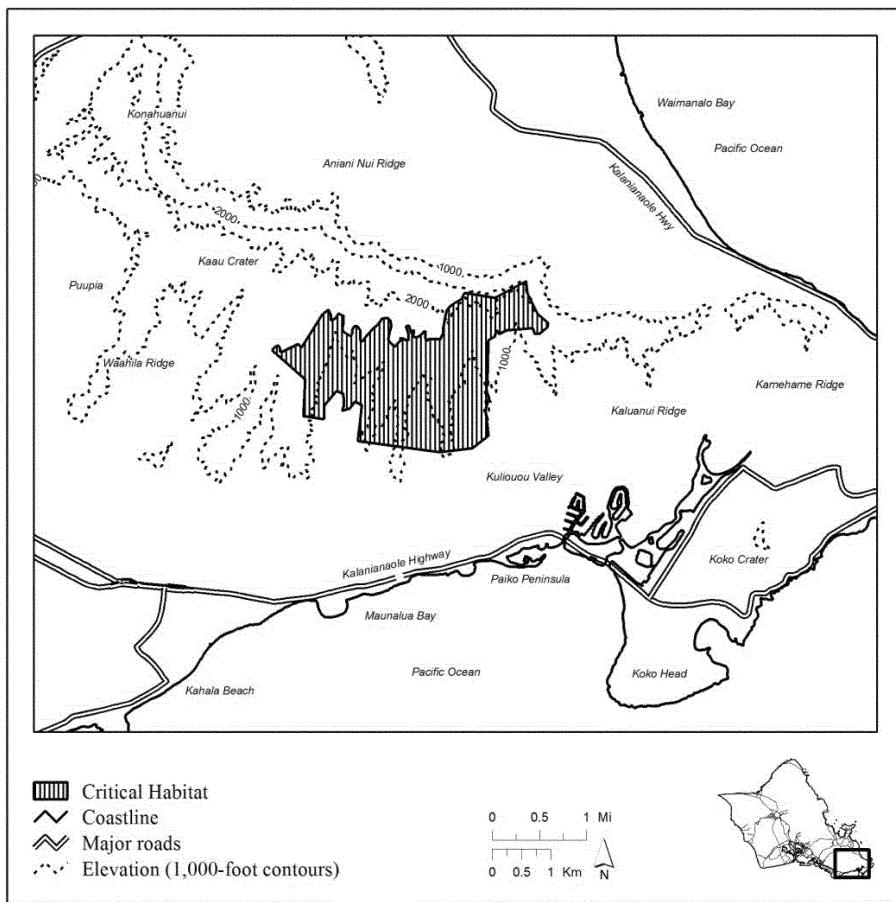
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*hirsuta, Phyllostegia mollis, Phyllostegia parviflora var. parviflora, Plantago princeps var. princeps, Pleomele forbesii, Pteralyxia macrocarpa, Schiedea kaalae, Schiedea nuttallii, Solanum sandwicense,*

*Tetraplasandra gymnocarpa, and Tetraplasandra lydgatei.*

(ii) Map of Oahu—Lowland Mesic—Unit 7 (Map 17) follows:

**Map 17**  
**Oahu—Lowland Mesic**  
**Unit 7**



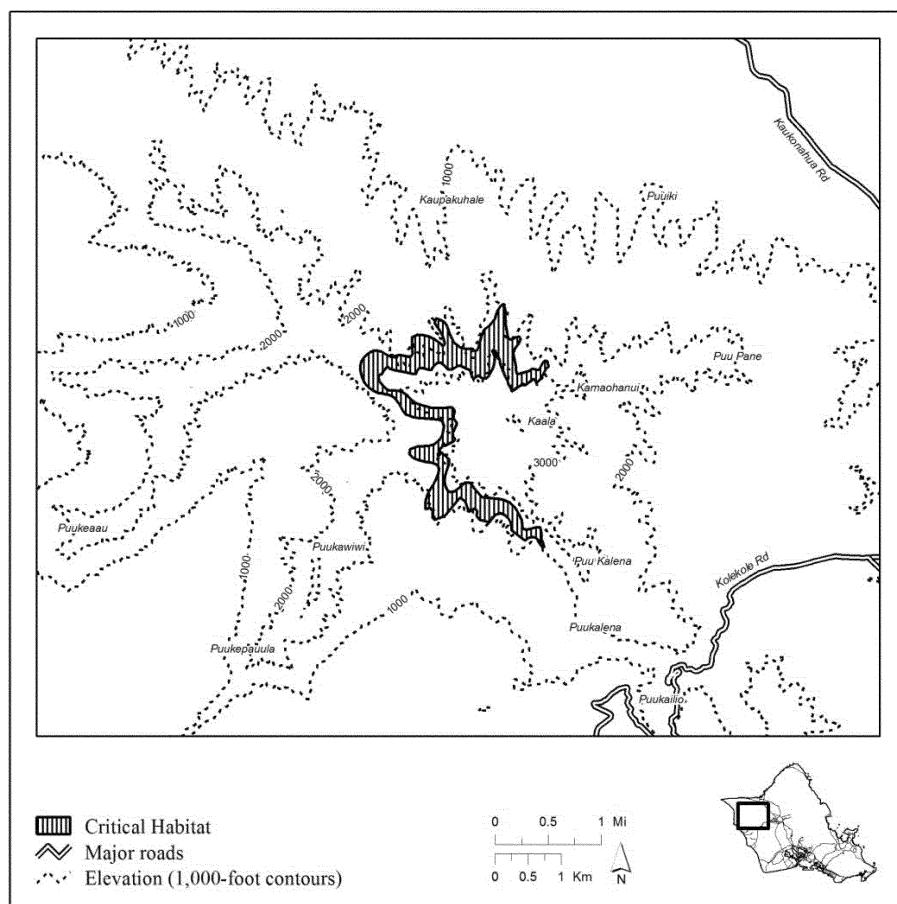
(19) Oahu—Lowland Wet—Unit 1 (541 ac; 219 ha).

(i) This unit is critical habitat for *Cyanea acuminata*, *Cyanea calycina*, *Cyanea grimesiana* ssp. *grimesiana*, *Cyanea grimesiana* ssp. *obatae*,

*Cyrtandra dentata*, *Diplazium molokaiense*, *Gardenia mannii*, *Gouania vitifolia*, *Hesperomannia arbuscula*, *Isodendrion longifolium*, *Labordia cyrtandrae*, *Lobelia oahuensis*, *Phyllostegia hirsuta*, *Phyllostegia mollis*,

*Plantago princeps* var. *princeps*, (ii) Map of Oahu—Lowland Wet—Unit *Pteralyxia macrocarpa*, *Schiedea hookeri*, 1 (Map 18) follows: *Schiedea kaalae*, and *Urera kaalae*.

**Map 18**  
**Oahu—Lowland Wet**  
**Unit 1**



(20) Oahu—Lowland Wet—Unit 2 (20 ac; 8 ha), Oahu—Lowland Wet—Unit 3 (29 ac; 12 ha), and Oahu—Lowland Wet—Unit 4 (27 ac; 11 ha).

(i) These units are critical habitat for *Cyanea acuminata*, *Cyanea calycina*, *Cyanea grimesiana* ssp. *grimesiana*, *Cyanea grimesiana* ssp. *obatae*,

*Cyrtandra dentata*, *Diplazium molokaiense*, *Gardenia manni*, *Gouania vitifolia*, *Hesperomannia arbuscula*, *Isodendrion longifolium*, *Labordia cyrtandrae*, *Lobelia oahuensis*, *Phyllostegia hirsuta*, *Phyllostegia mollis*, *Plantago princeps* var. *princeps*,

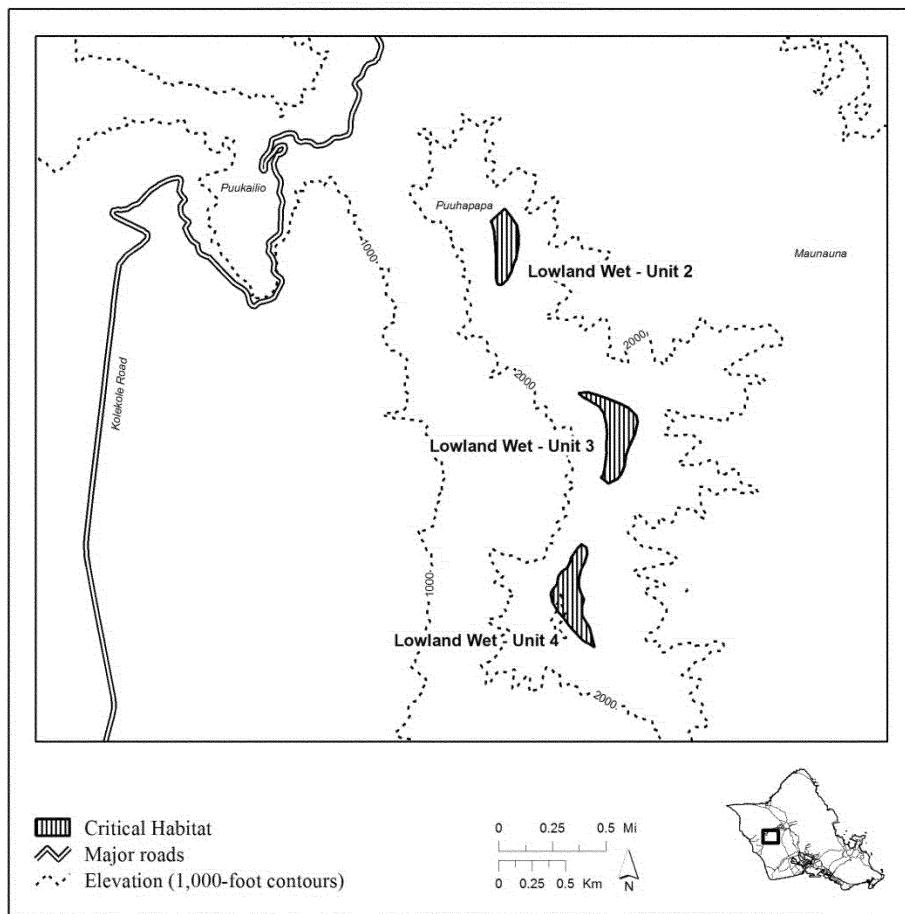
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*Pteralyxia macrocarpa*, *Schiedea hookeri*, *Schiedea kaalae*, and *Urera kaalae*. Oahu—Lowland Wet—Unit 4 (Map 19) follows:

(ii) Map of Oahu—Lowland Wet—Unit 2, Oahu—Lowland Wet—Unit 3, and

**Map 19  
Oahu—Lowland Wet  
Unit 2, Unit 3 and Unit 4**



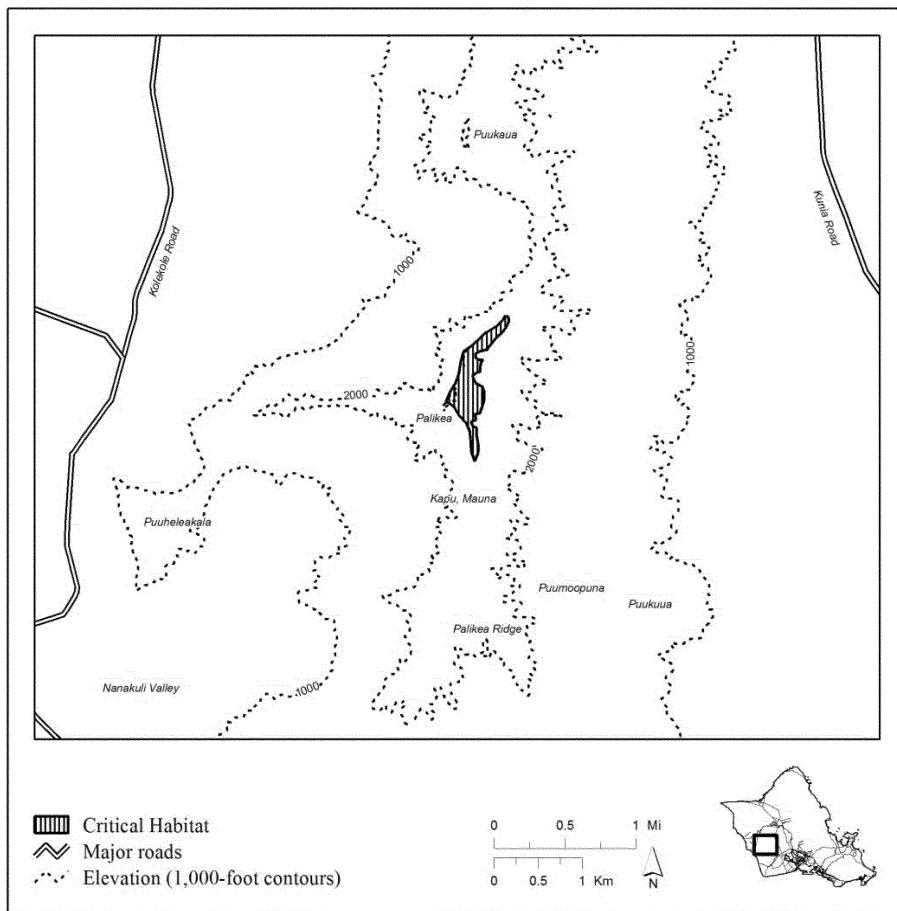
(21) Oahu—Lowland Wet—Unit 5 (74 ac; 30 ha).

(i) This unit is critical habitat for *Cyanea acuminata*, *Cyanea calycina*, *Cyanea grimesiana* ssp. *grimesiana*, *Cyanea grimesiana* ssp. *obatae*, *Cyrtandra dentata*, *Diplazium*

*molokaiense*, *Gardenia mannii*, *Gouania vitifolia*, *Hesperomannia arbuscula*, *Isodendrion longifolium*, *Labordia cyrtandrae*, *Lobelia oahuensis*, *Phyllostegia hirsuta*, *Phyllostegia mollis*, *Plantago princeps* var. *princeps*,

*Pteralyxia macrocarpa*, *Schiedea hookeri*, (ii) Map of Oahu—Lowland Wet—Unit  
*Schiedea kaalae*, and *Urera kaalae*. 5 (Map 20) follows:

**Map 20**  
**Oahu—Lowland Wet**  
**Unit 5**



(22) Oahu—Lowland Wet—Unit 6 (790 ac; 320 ha), Oahu—Lowland Wet—Unit 7 (1,787 ac; 723 ha), and Oahu—Lowland Wet—Unit 8 (3,041 ac; 1,231 ha).

(i) These units are critical habitat for *Adenophorus perakensis*, *Chamaesyce rockii*, *Cyanea acuminata*, *Cyanea calycina*, *Cyanea crispa*, *Cyanea grimesiana* ssp. *grimesiana*, *Cyanea humboldtiana*,

*Cyanea koolauensis*, *Cyanea lanceolata*, *Cyanea purpurellifolia*, *Cyanea st.-johnii*, *Cyanea truncata*, *Cyrtandra dentata*, *Cyrtandra gracilis*, *Cyrtandra kaulantha*, *Cyrtandra polyantha*, *Cyrtandra sessilis*, *Cyrtandra subumbellata*, *Cyrtandra viridiflora*, *Cyrtandra waiolani*, *Gardenia mannii*, *Hesperomannia arborescens*, *Huperzia nutans*, *Isodendrion*

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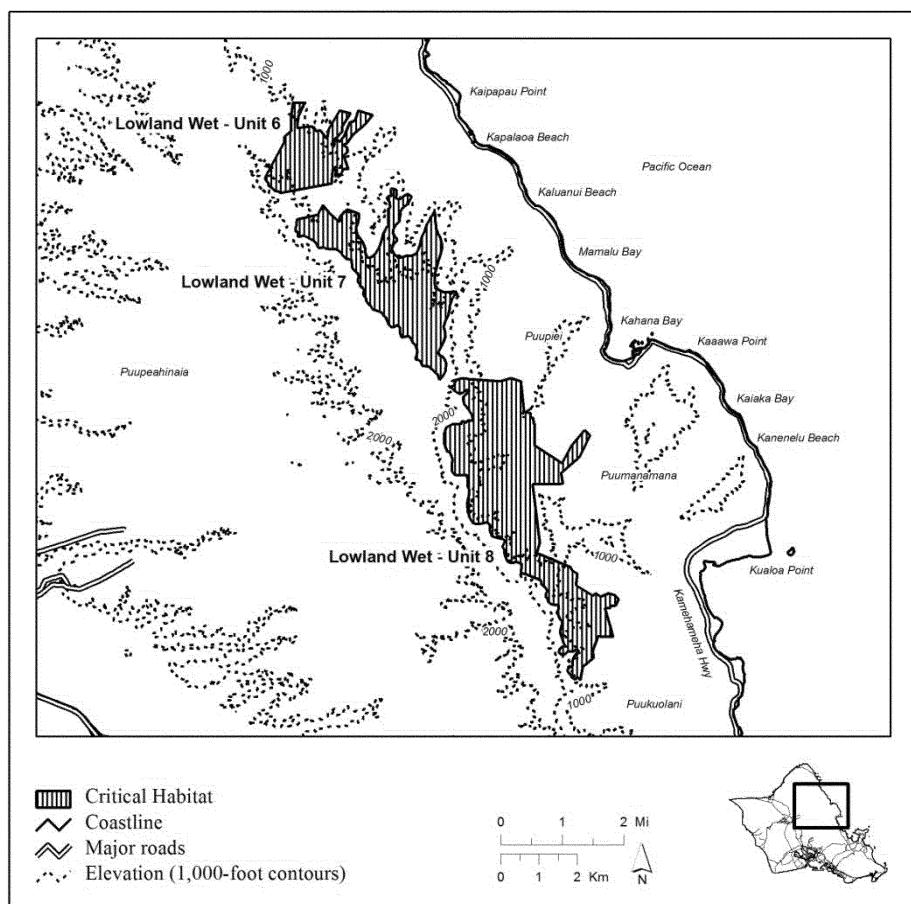
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*longifolium, Labordia cyrtandrae, Lobelia gaudichaudii ssp. koolauensis, Lobelia oahuensis, Melicope hiaakae, Melicope lydgatei, Myrsine juddii, Phyllostegia hirsuta, Phyllostegia parviflora var. parviflora, Plantago princeps var. longibracteata, Plantago princeps var. princeps, Platanthera holochila, Platydesma cornuta var. cornuta, Psychotria hexandra ssp. oahuensis,*

*Pteralyxia macrocarpa, Pteris lidgatei, Sanicula purpurea, Tetraplasandra gymnocarpa, Trematolobelia singularis, Viola oahuensis, and Zanthoxylum oahuense.*

(ii) Map of Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, and Oahu—Lowland Wet—Unit 8 (Map 21) follows:

**Map 21**  
**Oahu—Lowland Wet**  
**Unit 6, Unit 7 and Unit 8**



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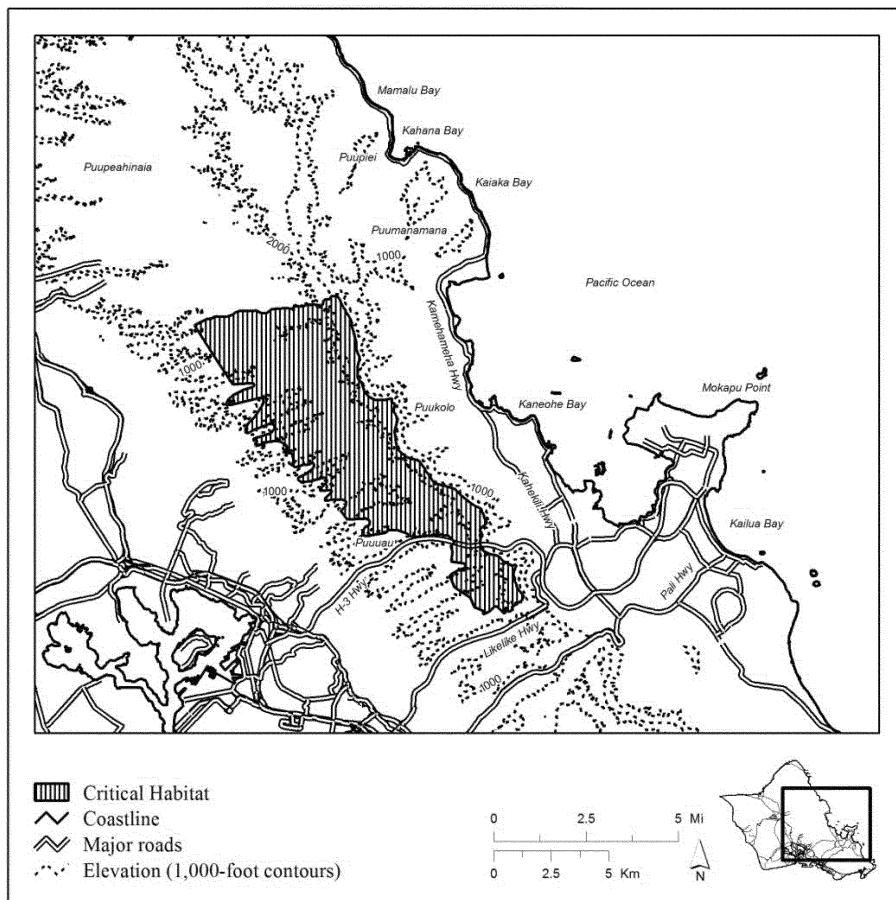
(23) Oahu—Lowland Wet—Unit 9  
(15,728 ac; 6,365 ha).

(i) This unit is critical habitat for *Adenophorus periens*, *Chamaesyce rockii*, *Cyanea acuminata*, *Cyanea calycina*, *Cyanea crispa*, *Cyanea grimesiana* ssp. *grimesiana*, *Cyanea humboldtiana*, *Cyanea koolauensis*, *Cyanea lanceolata*, *Cyanea purpurellifolia*, *Cyanea st.-johnii*, *Cyanea truncata*, *Cyrtandra dentata*, *Cyrtandra gracilis*, *Cyrtandra kaulantha*, *Cyrtandra polyantha*, *Cyrtandra sessilis*, *Cyrtandra subumbellata*, *Cyrtandra viridiiflora*, *Cyrtandra waiolani*, *Gardenia mannii*, *Hesperomannia arborescens*, *Huperzia nutans*, *Isodendrion longifolium*, *Labordia cyrtandrae*, *Lobelia*

*gaudichaudii* ssp. *koolauensis*, *Lobelia oahuensis*, *Melicope hiiakae*, *Melicope lydgatei*, *Myrsine juddii*, *Phyllostegia hirsuta*, *Phyllostegia parviflora* var. *parviflora*, *Plantago princeps* var. *longibracteata*, *Plantago princeps* var. *princeps*, *Platanthera holochila*, *Platydesma cornuta* var. *cornuta*, *Psychotria hexandra* ssp. *oahuensis*, *Pteralyxia macrocarpa*, *Pteris lidgatei*, *Sanicula purpurea*, *Tetraplasandra gymnocarpa*, *Trematolobelia singularis*, *Viola oahuensis*, and *Zanthoxylum oahuense*.

(ii) Map of Oahu—Lowland Wet—Unit 9 (Map 22) follows:

**Map 22**  
**Oahu—Lowland Wet**  
**Unit 9**



(24) Oahu—Lowland Wet—Unit 10 (124 ac; 50 ha), Oahu—Lowland Wet—Unit 11 (124 ac; 50 ha), and Oahu—Lowland Wet—Unit 12 (53 ac; 21 ha).

(i) These units are critical habitat for *Adenophorus periens*, *Chamaesyce rockii*, *Cyanea acuminata*, *Cyanea calycina*, *Cyanea crispa*, *Cyanea grimesiana* ssp. *grimesiana*, *Cyanea humboldtiana*, *Cyanea koolauensis*, *Cyanea lanceolata*, *Cyanea purpurellifolia*, *Cyanea st.-johnii*, *Cyanea truncata*, *Cyrtandra dentata*, *Cyrtandra gracilis*, *Cyrtandra kaulantha*, *Cyrtandra polyantha*, *Cyrtandra sessilis*, *Cyrtandra subumbellata*, *Cyrtandra viridiflora*, *Cyrtandra waiolani*, *Gardenia mannii*, *Hesperomannia arborescens*, *Huperzia nutans*, *Isodendrion longifolium*, *Labordia cyrtandrae*, *Lobelia gaudichaudii* ssp. *koolauensis*, *Lobelia oahuensis*, *Melicope hiiakae*, *Melicope lydgatei*, *Myrsine juddii*, *Phyllostegia hirsuta*, *Phyllostegia parviflora* var. *parviflora*, *Plantago princeps* var. *longibracteata*, *Plantago princeps* var. *princeps*, *Platanthera holochila*,

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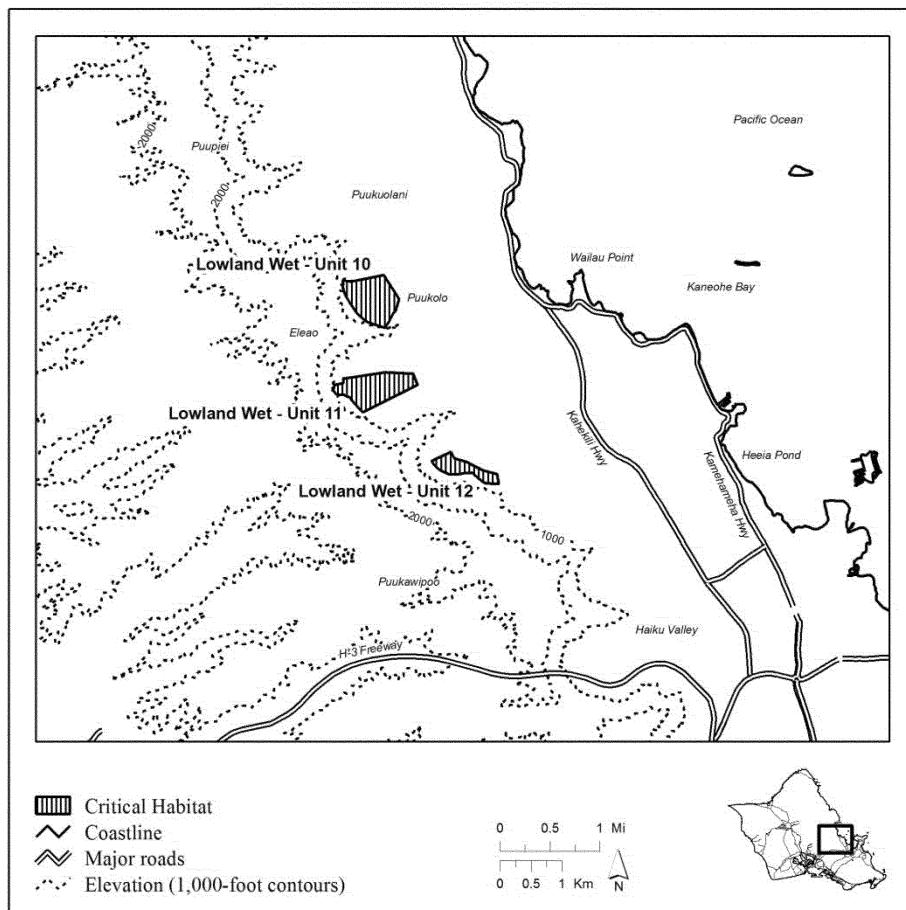
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*Platydesma cornuta* var. *cornuta*,  
*Psychotria hexandra* ssp. *oahuensis*,  
*Pteralyxia macrocarpa*, *Pteris lidgatei*,  
*Sanicula purpurea*, *Tetraplasandra gymnocarpa*, *Trematolobelia singularis*,

*Viola oahuensis*, and *Zanthoxylum oahuense*.

(ii) Map of Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, and Oahu—Lowland Wet—Unit 12 (Map 23) follows:

**Map 23**  
**Oahu—Lowland Wet**  
**Unit 10, Unit 11 and Unit 12**



(25) Oahu—Lowland Wet—Unit 13 (75 ac; 30 ha), Oahu—Lowland Wet—Unit 14 (478 ac; 193 ha), Oahu—Lowland Wet—Unit 15 (407 ac; 165 ha), and Oahu—Lowland Wet—Unit 16 (2,507 ac; 1,014 ha).

(i) These units are critical habitat for *Adenophorus periens*, *Chamaesyce rockii*, *Cyanea acuminata*, *Cyanea calycina*, *Cyanea crispa*, *Cyanea grimesiana* ssp. *grimesiana*, *Cyanea humboldtiana*,

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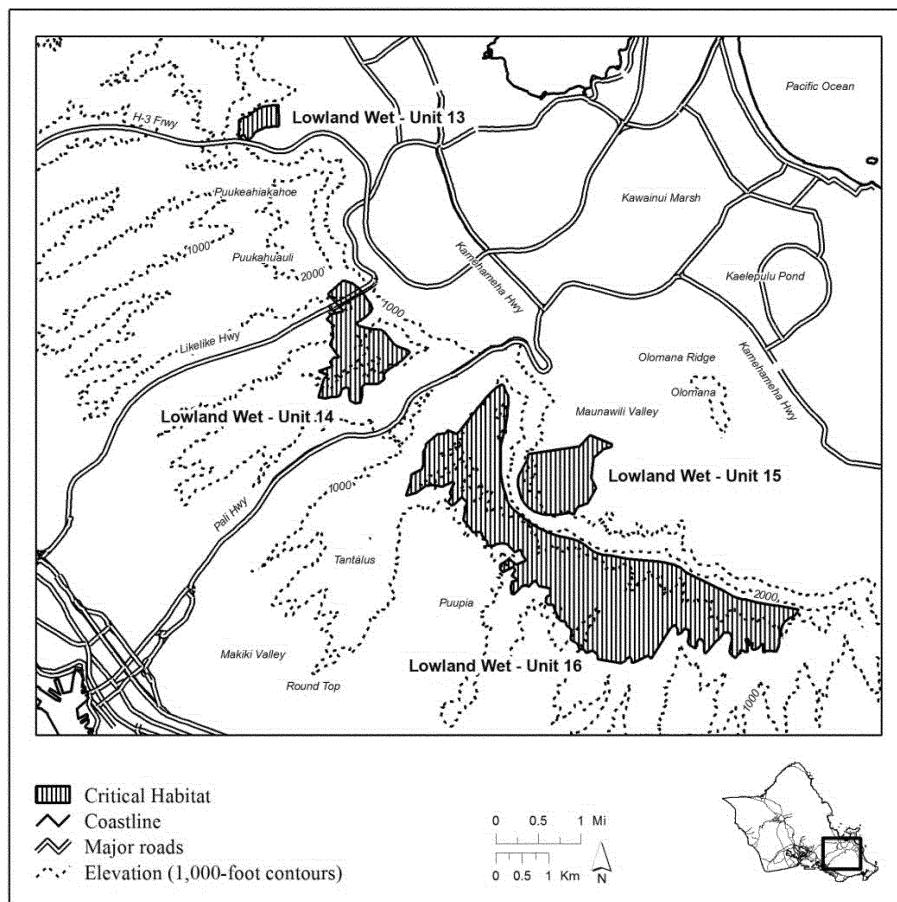
*Cyanea koolauensis*, *Cyanea lanceolata*,  
*Cyanea purpurellifolia*, *Cyanea st.-johnii*,  
*Cyanea truncata*, *Cyrtandra dentata*,  
*Cyrtandra gracilis*, *Cyrtandra kaulantha*,  
*Cyrtandra polyantha*, *Cyrtandra sessilis*,  
*Cyrtandra subumbellata*, *Cyrtandra viridiflora*,  
*Cyrtandra waiolani*, *Gardenia mannii*,  
*Hesperomea arborescens*,  
*Huperzia nutans*, *Isodendrion longifolium*,  
*Labordia cyrtandrae*, *Lobelia gaudichaudii* ssp. *koolauensis*,  
*Lobelia oahuensis*, *Melicope hiiakae*, *Melicope lydgatei*,  
*Myrsine juddii*, *Phyllostegia hirsuta*,  
*Phyllostegia parviflora* var. *parviflora*,  
*Plantago princeps* var.

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*longibracteata*, *Plantago princeps* var. *princeps*,  
*Platanthera holochila*,  
*Platydesma cornuta* var. *cornuta*,  
*Psychotria hexandra* ssp. *oahuensis*,  
*Pteralyxia macrocarpa*, *Pteris lidgatei*,  
*Sanicula purpurea*, *Tetraplasandra gymnocarpa*,  
*Trematolobelia singularis*,  
*Viola oahuensis*, and *Zanthoxylum oahuense*.

(ii) Map of Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16 (Map 24) follows:

**Map 24**  
**Oahu—Lowland Wet**  
**Unit 13, Unit 14, Unit 15 and Unit 16**



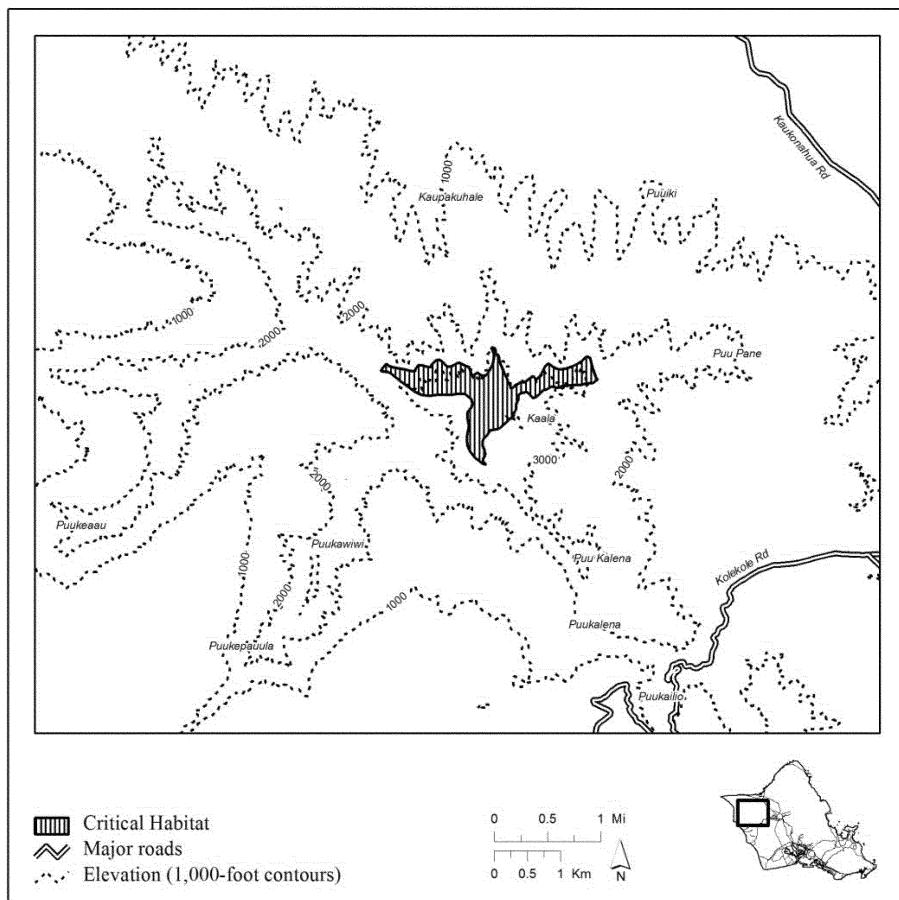
(26) Oahu—Montane Wet—Unit 1 (370 ac; 150 ha).

(i) This unit is critical habitat for *Alectryon macrococcus*, *Cyanea acuminata*, *Cyanea calycina*, *Labordia*

*cyrtandrae*, *Lobelia oahuensis*, *Melicope christophersenii*, *Phyllostegia hirsuta*, and *Schiedea trinervis*.

(ii) Map of Oahu—Montane Wet—Unit 1 (Map 25) follows:

**Map 25**  
**Oahu—Montane Wet**  
**Unit 1**



(27) Oahu—Dry Cliff—Unit 1 (49 ac; 20 ha), Oahu—Dry Cliff—Unit 2 (412 ac; 167 ha), and Oahu—Dry Cliff—Unit 3 (450 ac; 182 ha).

(i) These units are critical habitat for *Abutilon sandwicense*, *Achyranthes splendens* var. *rotundata*, *Alectryon macrococcus*, *Bonamia menziesii*, *Cenchrus agrimonoides*, *Chamaesyce herbstii*, *Chamaesyce kuwaleana*, *Cyanea grimesiana* ssp. *obatae*, *Cyrtandra dentata*, *Diellia falcata*, *Diellia unisora*, *Dubautia herbstobatae*, *Eragrostis*

*fosbergii*, *Flueggea neowaura*, *Gouania meyenii*, *Gouania vitifolia*, *Isodendrion laurifolium*, *Isodendrion pyrifolium*, *Kadua degeneri*, *Kadua parvula*, *Korthalsella degeneri*, *Lepidium arbuscula*, *Lipochaeta lobata* var. *leptophylla*, *Lobelia niihauensis*, *Melanthera tenuifolia*, *Melicope makahae*, *Melicope saint-johnii*, *Neraudia angulata*, *Nototrichium humile*, *Peucedanum sandwicense*, *Phyllostegia kaalaensis*, *Plantago princeps* var. *princeps*, *Platydesma cornuta* var.

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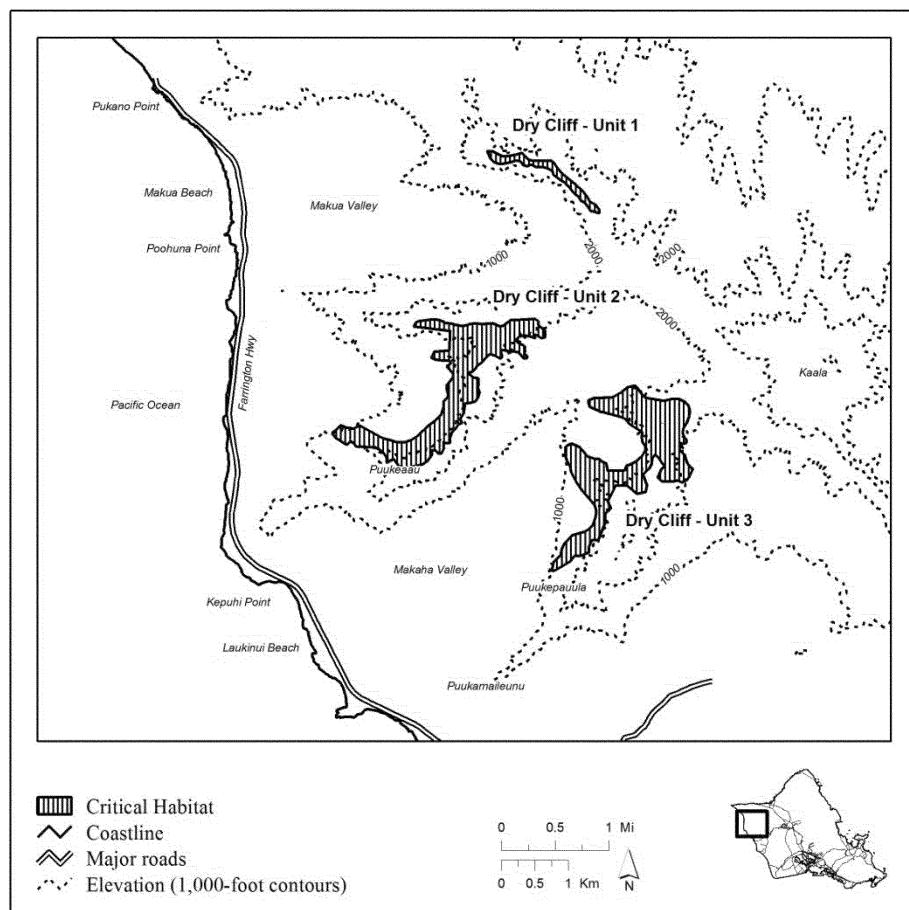
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*decurrens, Pleomele forbesii, Pteralyxia macrocarpa, Sanicula mariversa, Schiedea hookeri, Schiedea obovata, Schiedea trinervis, Silene lanceolata, Silene perlmanii, Spermolepis hawaiiensis, Tetramolopium filiforme, Tetramolopium*

*lepidotum ssp. lepidotum, and Viola chamissoniana ssp. chamissoniana.*

(ii) Map of Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, and Oahu—Dry Cliff—Unit 3 (Map 26) follows:

**Map 26  
Oahu—Dry Cliff  
Unit 1, Unit 2 and Unit 3**



(28) Oahu—Dry Cliff—Unit 4 (24 ac; 10 ha) and Oahu—Dry Cliff—Unit 6 (149 ac; 60 ha).

(i) These units are critical habitat for *Abutilon sandwicense*, *Achyranthes*

*splendens* var. *rotundata*, *Alectryon macrococcus*, *Bonamia menziesii*, *Cenchrus agrimonoides*, *Chamaesyce herbstii*, *Chamaesyce kuwaleana*, *Cyanea grimesiana* ssp. *obatae*, *Cyrtandra*

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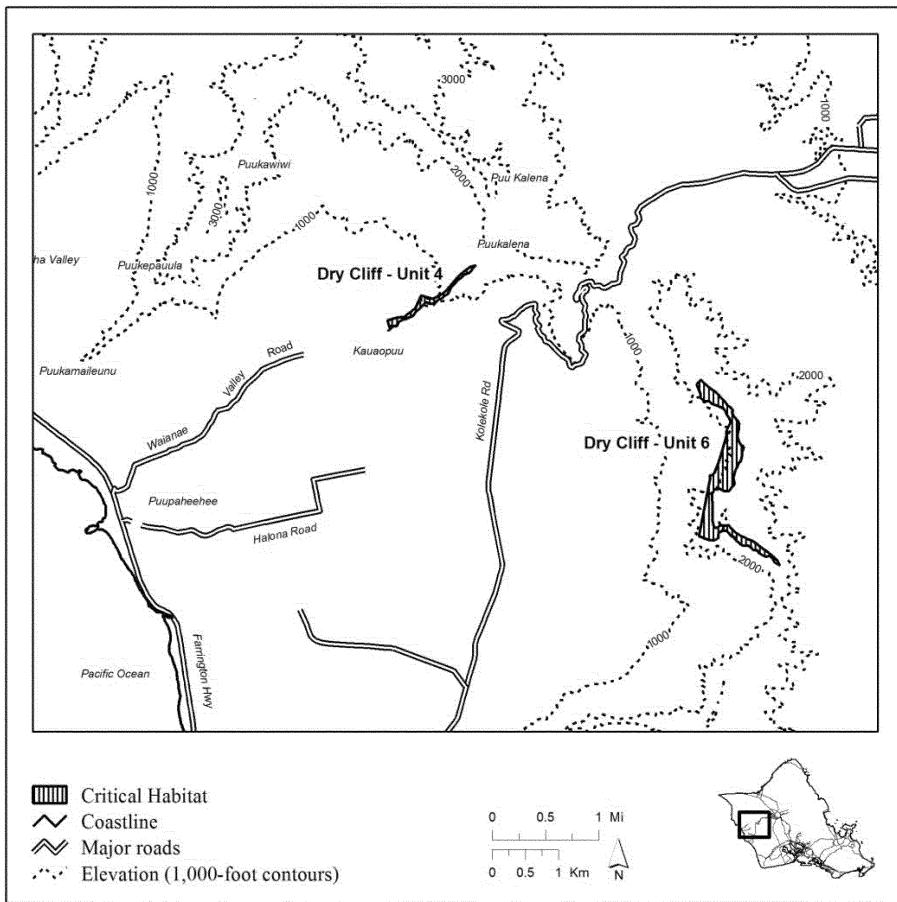
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*dentata*, *Diellia falcata*, *Diellia unisora*, *Dubautia herbstobatae*, *Eragrostis fosbergii*, *Flueggea neowawraea*, *Gouania meyenii*, *Gouania vitifolia*, *Isodendrion laurifolium*, *Isodendrion pyrifolium*, *Kadua degeneri*, *Kadua parvula*, *Korthalsella degeneri*, *Lepidium arbuscula*, *Lipochaeta lobata* var. *leptophylla*, *Lobelia niihauensis*, *Melanthera tenuifolia*, *Melicope makahae*, *Melicope saint-johnii*, *Neraudia angulata*, *Nototrichium humile*, *Peucedanum sandwicense*, *Phyllostegia*

*kaalaensis*, *Plantago princeps* var. *princeps*, *Platydesma cornuta* var. *decurrens*, *Pleomele forbesii*, *Pteralyxia macrocarpa*, *Sanicula mariversa*, *Schiedea hookeri*, *Schiedea obovata*, *Schiedea trinervis*, *Silene lanceolata*, *Silene perlmanii*, *Spermolepis hawaiiensis*, *Tetramolopium filiforme*, *Tetramolopium lepidotum* ssp. *lepidotum*, and *Viola chamissoniana* ssp. *chamissoniana*.

(ii) Map of Oahu—Dry Cliff—Unit 4 and Oahu—Dry Cliff—Unit 6 (Map 27) follows:

**Map 27**  
**Oahu—Dry Cliff**  
**Unit 4 and Unit 6**



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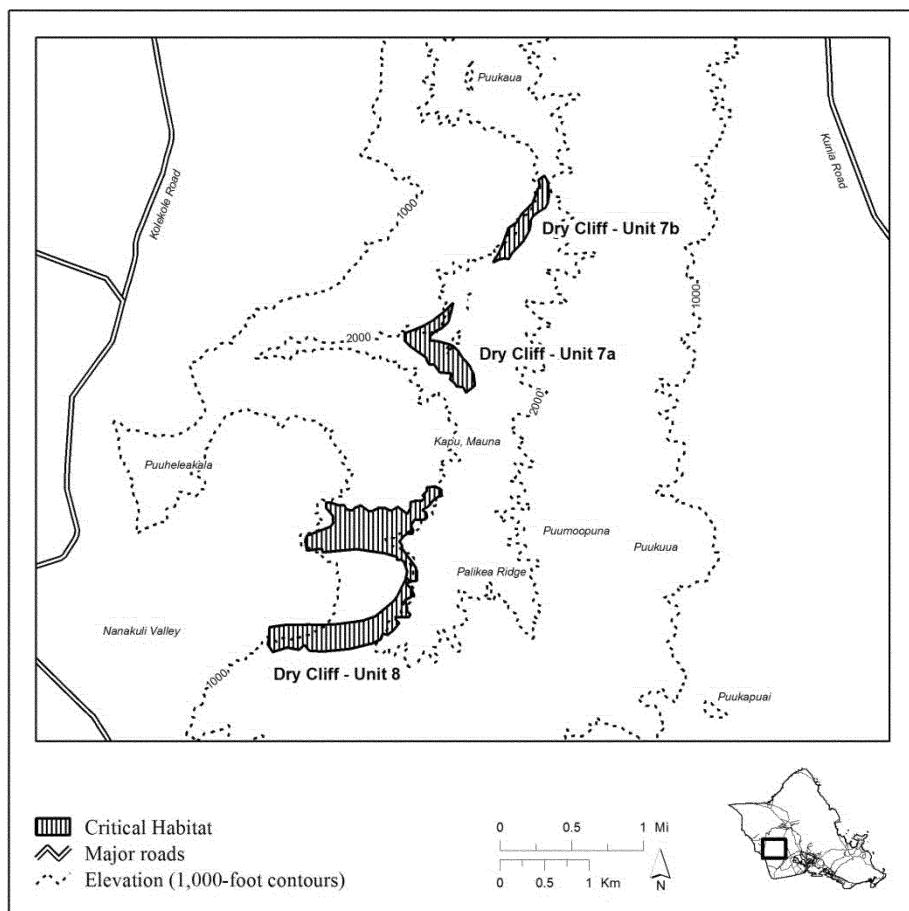
(29) Oahu—Dry Cliff—Unit 7a (68 ac; 27 ha), Oahu—Dry Cliff—Unit 7b (38 ac; 16 ha), and Oahu—Dry Cliff—Unit 8 (259 ac; 105 ha).

(i) These units are critical habitat for *Abutilon sandwicense*, *Achyranthes splendens* var. *rotundata*, *Alectryon macrococcus*, *Bonamia menziesii*, *Cenchrus agrimonoides*, *Chamaesyce herbstii*, *Chamaesyce kuwaleana*, *Cyanea grimesiana* ssp. *obatae*, *Cyrtandra dentata*, *Diellia falcata*, *Diellia unisora*, *Dubautia herbstobatae*, *Eragrostis fosbergii*, *Flueggea neowawraea*, *Gouania meyenii*, *Gouania vitifolia*, *Isodendrion laurifolium*, *Isodendrion pyrifolium*, *Kadua degeneri*, *Kadua parvula*, *Korthalsella degeneri*, *Lepidium arbuscula*, *Lipochaeta lobata* var.

*leptophylla*, *Lobelia niihauensis*, *Melanthera tenuifolia*, *Melicope makahae*, *Melicope saint-johnii*, *Neraudia angulata*, *Nototrichium humile*, *Peucedanum sandwicense*, *Phyllostegia kaalaensis*, *Plantago princeps* var. *princeps*, *Platydesma cornuta* var. *decurrens*, *Pleomele forbesii*, *Pteralyxia macrocarpa*, *Sanicula mariversa*, *Schiedea hookeri*, *Schiedea obovata*, *Schiedea trinervis*, *Silene lanceolata*, *Silene perlmanii*, *Spermolepis hawaiiensis*, *Tetramolopium filiforme*, *Tetramolopium lepidotum* ssp. *lepidotum*, and *Viola chamissoniana* ssp. *chamissoniana*.

(ii) Map of Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8 (Map 28) follows:

**Map 28**  
**Oahu—Dry Cliff**  
**Unit 7a, Unit 7b and Unit 8**



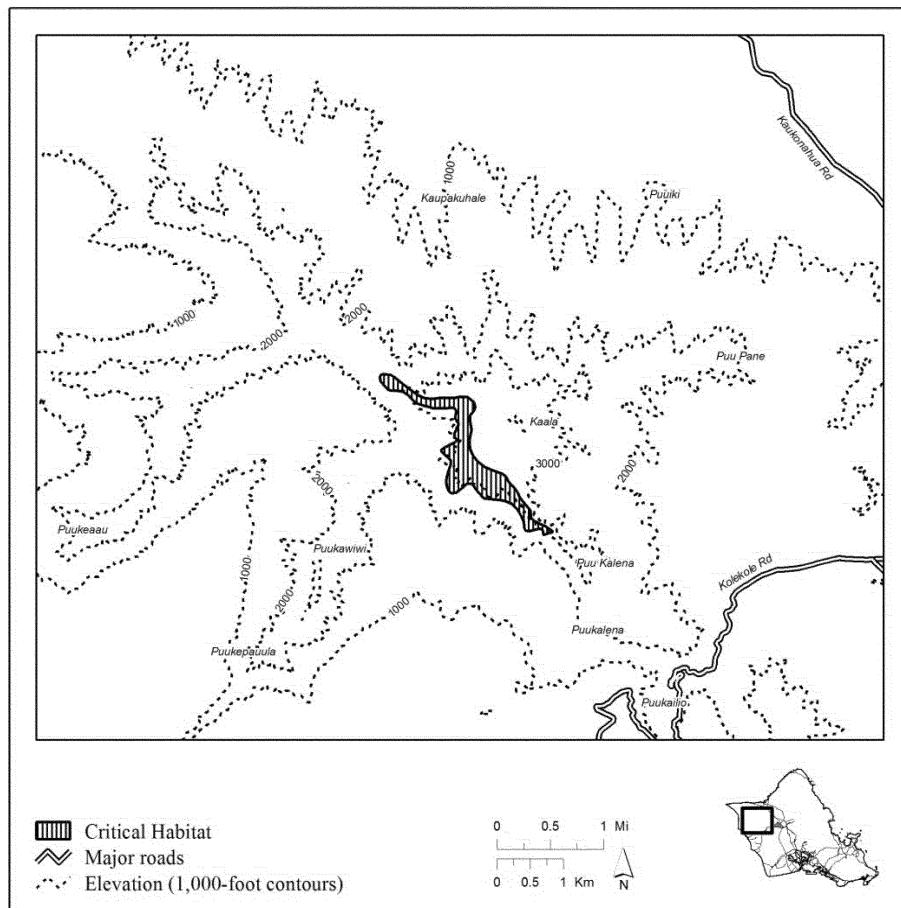
(30) Oahu—Wet Cliff—Unit 1 (235 ac; 95 ha).

(i) This unit is critical habitat for *Cyanea acuminata*, *Cyanea calycina*, *Labordia cyrtandrae*, *Lobelia oahuensis*, *Melicope christophersenii*, *Phyllostegia*

*hirsuta*, *Pteralyxia macrocarpa*, *Schiedea hookeri*, *Schiedea kaalae*, and *Schiedea trinervis*.

(ii) Map of Oahu—Wet Cliff—Unit 1 (Map 29) follows:

**Map 29**  
**Oahu—Wet Cliff**  
**Unit 1**



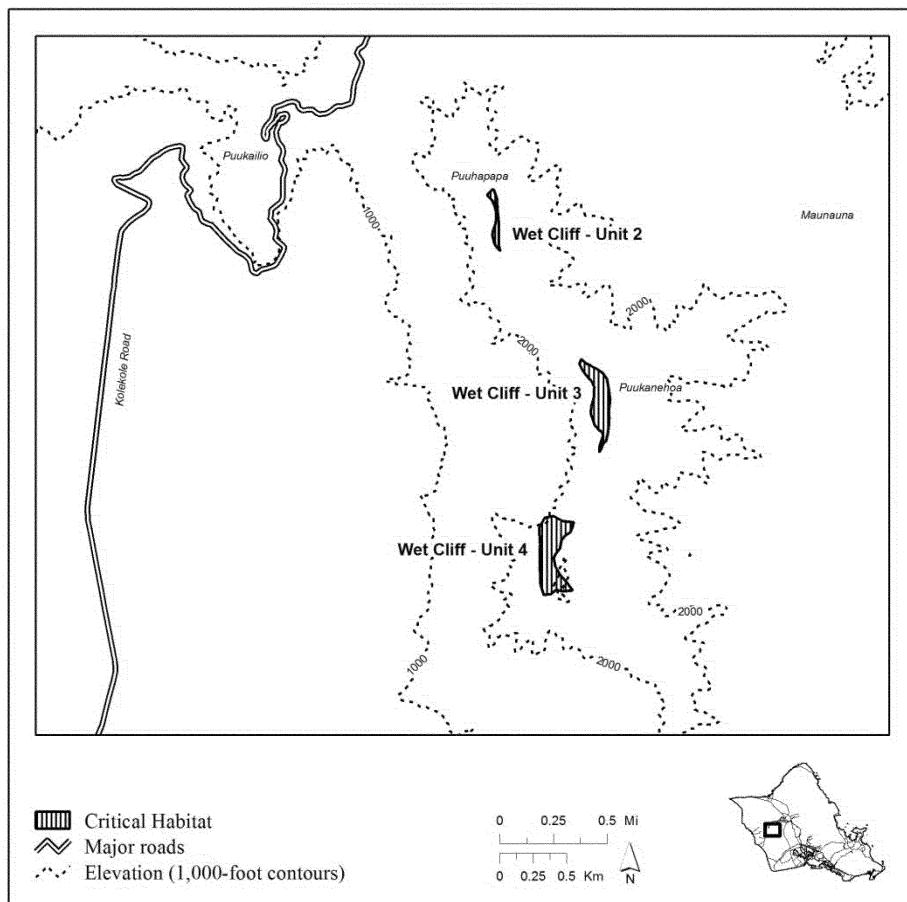
(31) Oahu—Wet Cliff—Unit 2 (3 ac; 1 ha), Oahu—Wet Cliff—Unit 3 (16 ac; 6 ha), and Oahu—Wet Cliff—Unit 4 (23 ac; 9 ha).

(i) These units are critical habitat for *Cyanea acuminata*, *Cyanea calycina*, *Labordia cyrtandrae*, *Lobelia oahuensis*,

*Melicope christophersenii*, *Phyllostegia hirsuta*, *Pteralyxia macrocarpa*, *Schiedea hookeri*, *Schiedea kaalae*, and *Schiedea trinervis*.

(ii) Map of Oahu—Wet Cliff—Unit 2, Oahu—Wet Cliff—Unit 3, and Oahu—Wet Cliff—Unit 4 (Map 30) follows:

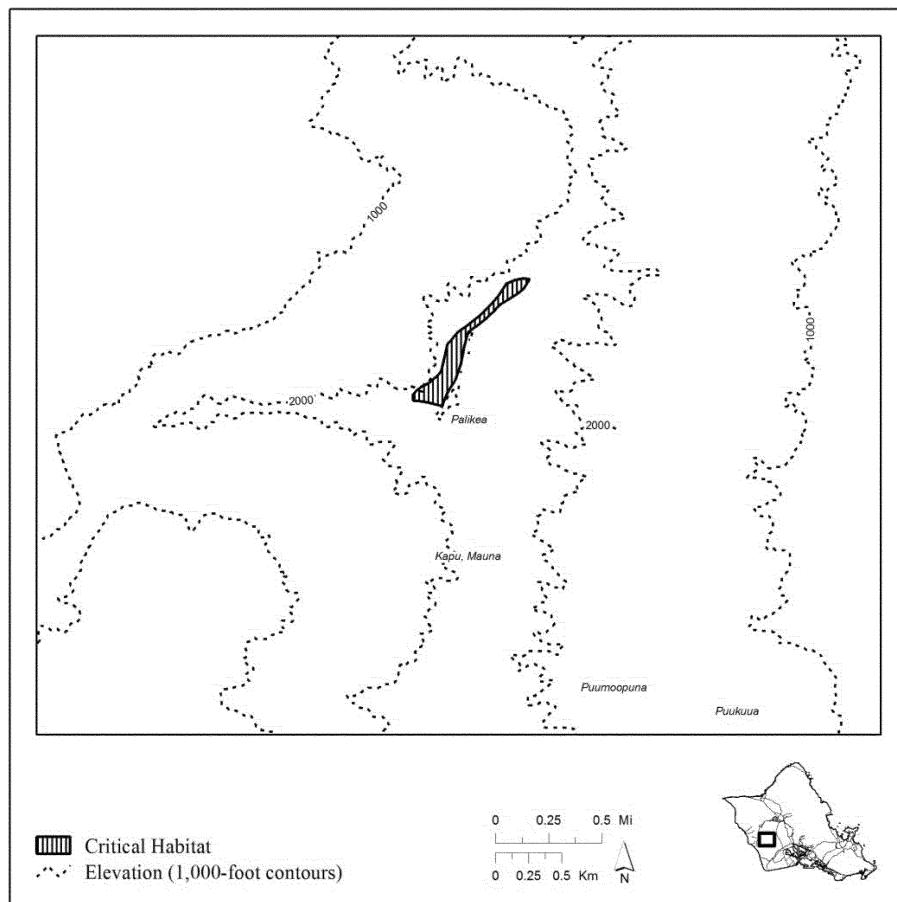
**Map 30**  
**Oahu—Wet Cliff**  
**Unit 2, Unit 3 and Unit 4**



(32) Oahu—Wet Cliff—Unit 5 (31 ac; 13 ha).

- (i) This unit is critical habitat for *Cyanea acuminata*, *Cyanea calycina*, *Labordia cyrtandrae*, *Lobelia oahuensis*, *Melicope christophersenii*, *Phyllotegia* *hirsuta*, *Pteralyxia macrocarpa*, *Schiedea hookeri*, *Schiedea kaalae*, and *Schiedea trinervis*.
- (ii) Map of Oahu—Wet Cliff—Unit 5 (Map 31) follows:

**Map 31**  
**Oahu—Wet Cliff**  
**Unit 5**



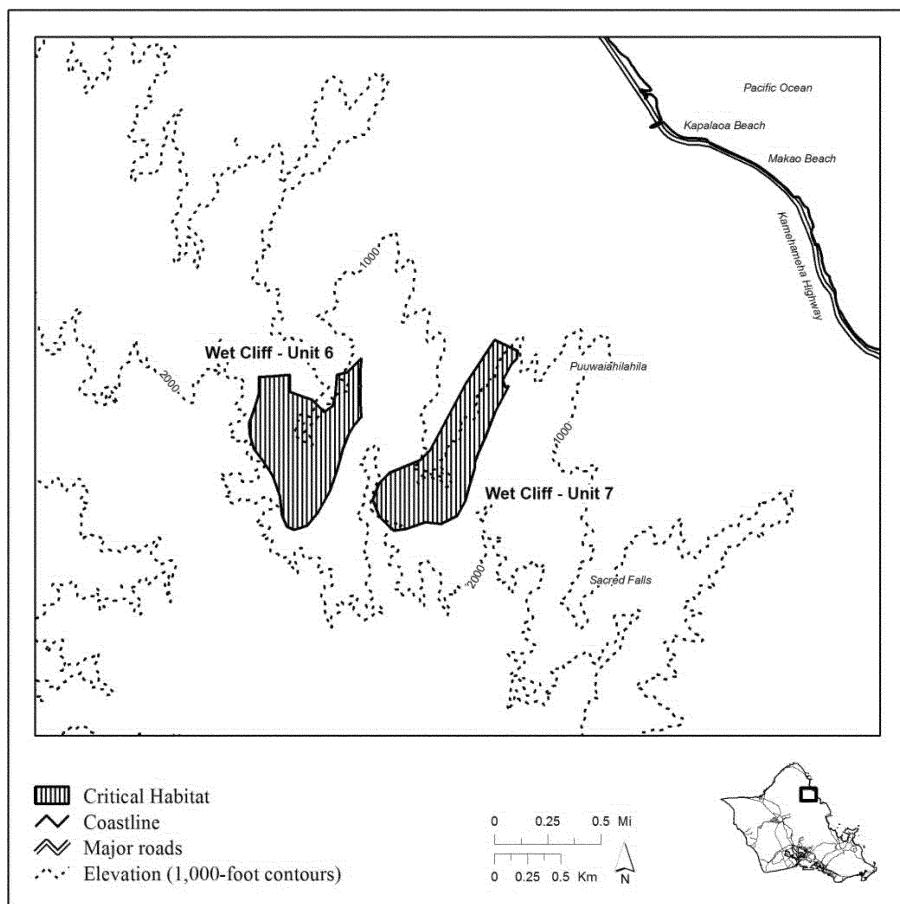
(33) Oahu—Wet Cliff—Unit 6 (151 ac; 61 ha) and Oahu—Wet Cliff—Unit 7 (144 ac; 58 ha).

(i) These units are critical habitat for *Adenophorus periens*, *Chamaesyce deppeana*, *Chamaesyce rockii*, *Cyanea acuminata*, *Cyanea calycina*, *Cyanea crispa*, *Cyanea humboldtiana*, *Cyanea purpureifolia*, *Cyanea st.-johnii*, *Cyanea truncata*, *Cyrtandra kaulantha*, *Cyrtandra sessilis*, *Cyrtandra subumbellata*, *Cyrtandra viridiflora*, *Huperzia nutans*, *Labordia cyrtandrae*,

*Lobelia oahuensis*, *Lysimachia filifolia*, *Phyllostegia hirsuta*, *Phyllostegia parviflora* var. *parviflora*, *Plantago princeps* var. *princeps*, *Psychotria hexandra* ssp. *oahuensis*, *Pteralyxia macrocarpa*, *Sanicula purpurea*, *Schiedea kaalae*, *Tetraplasandra gymnocarpa*, *Trematolobelia singularis*, and *Viola oahuensis*.

(ii) Map of Oahu—Wet Cliff—Unit 6 and Oahu—Wet Cliff—Unit 7 (Map 32) follows:

**Map 32**  
**Oahu—Wet Cliff**  
**Unit 6 and Unit 7**



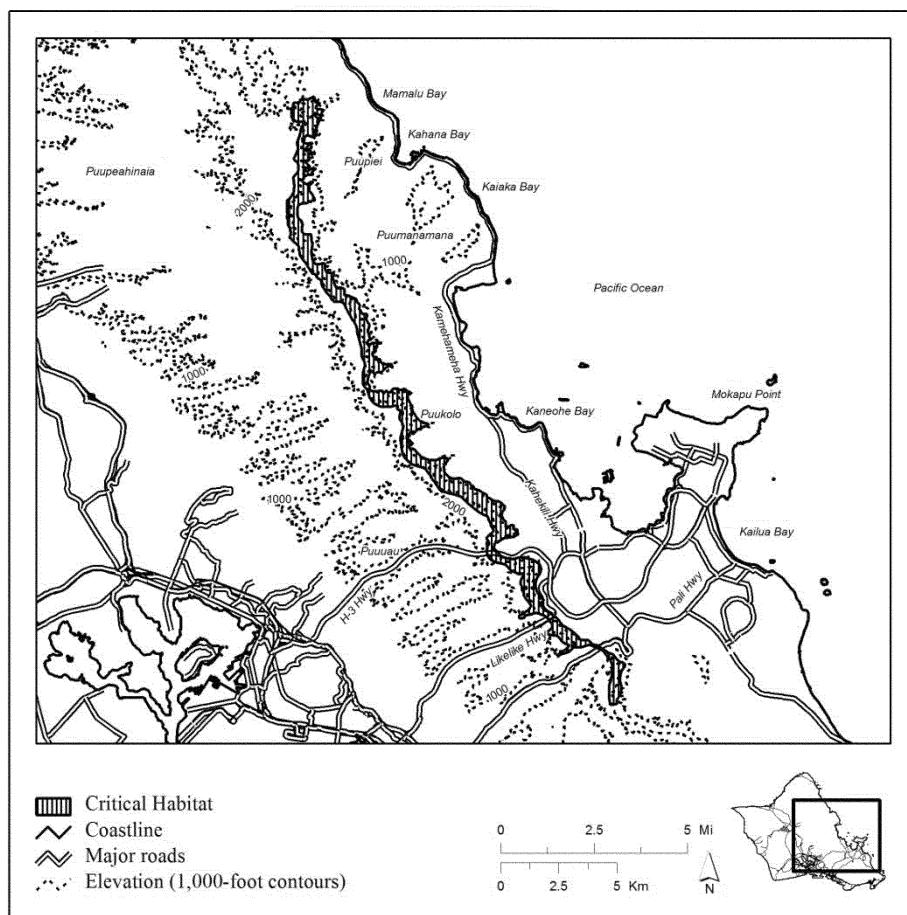
(34) Oahu—Wet Cliff—Unit 8 (4,649 ac; 1,881 ha).

(i) This unit is critical habitat for *Adenophorus periens*, *Chamaesyce deppeana*, *Chamaesyce rockii*, *Cyanea acuminata*, *Cyanea calycina*, *Cyanea crispa*, *Cyanea humboldtiana*, *Cyanea purpurellifolia*, *Cyanea st.-johnii*, *Cyanea truncata*, *Cyrtandra kaulantha*, *Cyrtandra sessilis*, *Cyrtandra subumbellata*, *Cyrtandra viridiflora*, *Huperzia nutans*, *Labordia cyrtandrae*,

*Lobelia oahuensis*, *Lysimachia filifolia*, *Phyllostegia hirsuta*, *Phyllostegia parviflora* var. *parviflora*, *Plantago princeps* var. *princeps*, *Psychotria hexandra* ssp. *oahuensis*, *Pteralyxia macrocarpa*, *Sanicula purpurea*, *Schiedea kaalae*, *Tetraplasandra gymnocarpa*, *Trematolobelia singularis*, and *Viola oahuensis*.

(ii) Map of Oahu—Wet Cliff—Unit 8 (Map 33) follows:

**Map 33**  
**Oahu—Wet Cliff**  
**Unit 8**



(35) TABLE OF PROTECTED SPECIES WITHIN EACH CRITICAL HABITAT UNIT FOR OAHU

Unit name	Species occupied	Species unoccupied
Oahu—Coastal—Unit 1	<i>Achyranthes splendens</i> var. <i>rotundata</i> ... <i>Chamaesyce celastroides</i> var. <i>kaenana</i> <i>Sesbania tomentosa</i> ....	<i>Achyranthes splendens</i> var. <i>rotundata</i> <i>Bidens amplexans</i> <i>Centaureum sebaeoides</i> <i>Chamaesyce celastroides</i> var. <i>kaenana</i> <i>Schiedea kealiae</i> <i>Sesbania tomentosa</i> <i>Vigna o-wahuensis</i>
Oahu—Coastal—Unit 2		<i>Centaureum sebaeoides</i> <i>Chamaesyce kuwaeana</i> <i>Sesbania tomentosa</i> <i>Vigna o-wahuensis</i>
Oahu—Coastal—Unit 3		

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(35) TABLE OF PROTECTED SPECIES WITHIN EACH CRITICAL HABITAT UNIT FOR OAHU—Continued

Unit name	Species occupied	Species unoccupied
Oahu—Coastal—Unit 4		<i>Centaurium sebaeoides</i> <i>Chamaesyce kuwaleana</i> <i>Sesbania tomentosa</i> <i>Vigna o-wahuensis</i>
Oahu—Coastal—Unit 5		<i>Centaurium sebaeoides</i> <i>Chamaesyce kuwaleana</i> <i>Sesbania tomentosa</i> <i>Vigna o-wahuensis</i>
Oahu—Coastal—Unit 6		<i>Centaurium sebaeoides</i> <i>Chamaesyce kuwaleana</i> <i>Sesbania tomentosa</i> <i>Vigna o-wahuensis</i>
Oahu—Coastal—Unit 7		<i>Centaurium sebaeoides</i> <i>Chamaesyce kuwaleana</i> <i>Sesbania tomentosa</i> <i>Vigna o-wahuensis</i>
Oahu—Coastal—Unit 8	<i>Sesbania tomentosa</i> .....	<i>Centaurium sebaeoides</i> <i>Chamaesyce kuwaleana</i> <i>Sesbania tomentosa</i> <i>Vigna o-wahuensis</i>
Oahu—Coastal—Unit 9	<i>Cyperus trachysanthos</i> .....	<i>Centaurium sebaeoides</i> <i>Chamaesyce kuwaleana</i> <i>Cyperus trachysanthos</i> <i>Marsilea villosa</i> <i>Sesbania tomentosa</i> <i>Vigna o-wahuensis</i>
Oahu—Coastal—Unit 10	<i>Centaurium sebaeoides</i> .....	<i>Centaurium sebaeoides</i> <i>Chamaesyce kuwaleana</i> <i>Sesbania tomentosa</i> <i>Vigna o-wahuensis</i>
Oahu—Coastal—Unit 11	<i>Marsilea villosa</i> .....	<i>Centaurium sebaeoides</i> <i>Chamaesyce kuwaleana</i> <i>Cyperus trachysanthos</i> <i>Marsilea villosa</i> <i>Sesbania tomentosa</i> <i>Vigna o-wahuensis</i>
Oahu—Coastal—Unit 12	<i>Marsilea villosa</i> .....	<i>Centaurium sebaeoides</i> <i>Chamaesyce kuwaleana</i> <i>Cyperus trachysanthos</i> <i>Marsilea villosa</i> <i>Sesbania tomentosa</i> <i>Vigna o-wahuensis</i>
Oahu—Coastal—Unit 13	<i>Achyranthes splendens</i> var. <i>rotundata</i> ...	<i>Achyranthes splendens</i> var. <i>rotundata</i> <i>Bidens amplexans</i> <i>Centaurium sebaeoides</i> <i>Chamaesyce celastroides</i> var. <i>kaenana</i> <i>Schiiedea kealiae</i> <i>Sesbania tomentosa</i> <i>Vigna o-wahuensis</i>
Oahu—Coastal—Unit 14	<i>Achyranthes splendens</i> var. <i>rotundata</i> ...	<i>Achyranthes splendens</i> var. <i>rotundata</i> <i>Bidens amplexans</i> <i>Centaurium sebaeoides</i> <i>Chamaesyce celastroides</i> var. <i>kaenana</i> <i>Schiiedea kealiae</i> <i>Sesbania tomentosa</i> <i>Vigna o-wahuensis</i>
Oahu—Coastal—Unit 15		

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(35) TABLE OF PROTECTED SPECIES WITHIN EACH CRITICAL HABITAT UNIT FOR OAHU—Continued

Unit name	Species occupied	Species unoccupied
Oahu—Lowland Dry—Unit 1	<i>Achyranthes splendens</i> var. <i>rotundata</i> ... <i>Bidens amplexens</i> ..... <i>Hibiscus brackenridgei</i> ..... <i>Nototrichium humile</i> ..... <i>Schiedea kealiae</i> .....	<i>Achyranthes splendens</i> var. <i>rotundata</i> <i>Bidens amplexens</i> <i>Centaurium sebaeoides</i> <i>Chamaesyce celastroides</i> var. <i>kaenana</i> <i>Schiedea kealiae</i> <i>Sesbania tomentosa</i> <i>Vigna o-wahuensis</i>  <i>Achyranthes splendens</i> var. <i>rotundata</i> <i>Bidens amplexens</i> <i>Bonamia menziesii</i> <i>Chamaesyce celastroides</i> var. <i>kaenana</i> <i>Euphorbia haeeleleana</i> <i>Gouania meyenii</i> <i>Gouania vitifolia</i> <i>Hibiscus brackenridgei</i> <i>Isodendron pyrifolium</i> <i>Melanthera tenuifolia</i> <i>Neraudia angulata</i> <i>Nototrichium humile</i> <i>Pleomele forbesii</i> <i>Schiedea hookeri</i> <i>Schiedea kealiae</i> <i>Spermolepis hawaiiensis</i>
Oahu—Lowland Dry—Unit 2	<i>Bonamia menziesii</i> ..... <i>Melanthera tenuifolia</i> ..... <i>Nototrichium humile</i> ..... <i>Pleomele forbesii</i> .....	<i>Achyranthes splendens</i> var. <i>rotundata</i> <i>Bidens amplexens</i> <i>Bonamia menziesii</i> <i>Chamaesyce celastroides</i> var. <i>kaenana</i> <i>Euphorbia haeeleleana</i> <i>Gouania meyenii</i> <i>Gouania vitifolia</i> <i>Hibiscus brackenridgei</i> <i>Isodendron pyrifolium</i> <i>Melanthera tenuifolia</i> <i>Neraudia angulata</i> <i>Nototrichium humile</i> <i>Pleomele forbesii</i> <i>Schiedea hookeri</i> <i>Schiedea kealiae</i> <i>Spermolepis hawaiiensis</i>
Oahu—Lowland Dry—Unit 6	<i>Doryopteris takeuchii</i> ..... <i>Spermolepis hawaiiensis</i> ..... <i>Cyperus trachysanthos</i> .....	<i>Doryopteris takeuchii</i> <i>Gouania meyenii</i> <i>Spermolepis hawaiiensis</i>  <i>Cyperus trachysanthos</i> <i>Doryopteris takeuchii</i> <i>Gouania meyenii</i> <i>Marsilea villosa</i> <i>Spermolepis hawaiiensis</i>
Oahu—Lowland Dry—Unit 7		
Oahu—Lowland Dry—Unit 8		
Oahu—Lowland Dry—Unit 9	<i>Achyranthes splendens</i> var. <i>rotundata</i> ...	<i>Achyranthes splendens</i> var. <i>rotundata</i> <i>Bidens amplexens</i>

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(35) TABLE OF PROTECTED SPECIES WITHIN EACH CRITICAL HABITAT UNIT FOR OAHU—Continued

Unit name	Species occupied		Species unoccupied
Oahu—Lowland Dry—Unit 10			<i>Bonamia menziesii</i> <i>Chamaesyce celastroides</i> var. <i>kaenana</i> <i>Chamaesyce skottsbergii</i> var. <i>skottsbergii</i> <i>Euphorbia haeleleleana</i> <i>Gouania meyenii</i> <i>Gouania vitifolia</i> <i>Hibiscus brackenridgei</i> <i>Isodendrion pyrifolium</i> <i>Melanthera tenuifolia</i> <i>Neraudia angulata</i> <i>Nototrichium humile</i> <i>Schiadea hookeri</i> <i>Schiadea kealiae</i> <i>Spermolepis hawaiiensis</i>
Oahu—Lowland Dry—Unit 11	<i>Chamaesyce skottsbergii.</i>	<i>skottsbergii</i> var.	<i>Achyranthes splendens</i> var. <i>rotundata</i> <i>Bidens amplexens</i> <i>Bonamia menziesii</i> <i>Chamaesyce celastroides</i> var. <i>kaenana</i> <i>Chamaesyce skottsbergii</i> var. <i>skottsbergii</i> <i>Euphorbia haeleleleana</i> <i>Gouania meyenii</i> <i>Gouania vitifolia</i> <i>Hibiscus brackenridgei</i> <i>Isodendrion pyrifolium</i> <i>Melanthera tenuifolia</i> <i>Neraudia angulata</i> <i>Nototrichium humile</i> <i>Schiadea hookeri</i> <i>Schiadea kealiae</i> <i>Spermolepis hawaiiensis</i>
Oahu—Lowland Mesic—Unit 1			<i>Achyranthes splendens</i> var. <i>rotundata</i> <i>Bidens amplexens</i> <i>Bonamia menziesii</i> <i>Chamaesyce celastroides</i> var. <i>kaenana</i> <i>Chamaesyce skottsbergii</i> var. <i>skottsbergii</i> <i>Euphorbia haeleleleana</i> <i>Gouania meyenii</i> <i>Gouania vitifolia</i> <i>Hibiscus brackenridgei</i> <i>Isodendrion pyrifolium</i> <i>Melanthera tenuifolia</i> <i>Neraudia angulata</i> <i>Nototrichium humile</i> <i>Schiadea hookeri</i> <i>Schiadea kealiae</i> <i>Spermolepis hawaiiensis</i>
			<i>Abutilon sandwicense</i> .....
			<i>Alectryon macrococcus</i> .....
			<i>Bonamia menziesii</i> .....
			<i>Cenchrus agrimonoides</i> .....
			<i>Chamaesyce herbstii</i> .....
			<i>Colubrina oppositifolia</i> .....
			<i>Ctenitis squamigera</i> .....
			<i>Cyanea acuminata</i> .....
			<i>Cyanea calycina</i> .....
			<i>Cyanea grimesiana</i> ssp. <i>Grimesiana</i> .....
			<i>Cyanea grimesiana</i> ssp. <i>Obatae</i> .....
			<i>Cyanea longiflora</i> .....
			<i>Cyanea pinnatifida</i> .....
			<i>Cyanea superba</i> .....
			<i>Cyrtandra dentata</i> .....
			<i>Delissea subcordata</i> .....
			<i>Diellia falcata</i> .....
			<i>Diellia unisora</i> .....

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(35) TABLE OF PROTECTED SPECIES WITHIN EACH CRITICAL HABITAT UNIT FOR OAHU—Continued

Unit name	Species occupied	Species unoccupied
Oahu—Lowland Mesic—Unit 2		
	<i>Dubautia herbstobatae</i> .....	<i>Diplazium molokaiense</i>
	<i>Eragrostis fosbergii</i> .....	<i>Dubautia herbstobatae</i>
	<i>Euphorbia haeeleleana</i> .....	<i>Eragrostis fosbergii</i>
	<i>Flueggea neowawraea</i> .....	<i>Eugenia koolauensis</i>
		<i>Euphorbia haeeleleana</i>
		<i>Flueggea neowawraea</i>
		<i>Gardenia manni</i>
		<i>Gouania meyenii</i>
		<i>Gouania vitifolia</i>
	<i>Hesperomannia arborescens</i> .....	<i>Hesperomannia arborescens</i>
	<i>Hesperomannia arbuscula</i> .....	<i>Hesperomannia arbuscula</i>
	<i>Hibiscus brackenridgei</i> .....	<i>Hibiscus brackenridgei</i>
	<i>Isodendron laurifolium</i> .....	<i>Isodendron laurifolium</i>
	<i>Isodendron longifolium</i> .....	<i>Isodendron longifolium</i>
	<i>Kadua degeneri</i> .....	<i>Kadua coriacea</i>
		<i>Kadua degeneri</i>
		<i>Kadua parvula</i>
	<i>Lobelia niihauensis</i> .....	<i>Lobelia cyrtandrae</i>
	<i>Melanthera tenuifolia</i> .....	<i>Lobelia niihauensis</i>
	<i>Melicope makahae</i> .....	<i>Melanthera tenuifolia</i>
	<i>Melicope pallida</i> .....	<i>Melicope makahae</i>
		<i>Melicope pallida</i>
		<i>Melicope saint-johnii</i>
	<i>Neraudia angulata</i> .....	<i>Neraudia angulata</i>
	<i>Nototrichium humile</i> .....	<i>Nototrichium humile</i>
	<i>Phyllostegia kaalaensis</i> .....	<i>Phyllostegia hirsuta</i>
		<i>Phyllostegia kaalaensis</i>
		<i>Phyllostegia mollis</i>
		<i>Phyllostegia parviflora</i>
		<i>Plantago princeps</i>
	<i>Platydesma cornuta</i> var. <i>decurrens</i> .....	<i>Platydesma cornuta</i> var. <i>decurrens</i>
	<i>Pleomele forbesii</i> .....	<i>Pleomele forbesii</i>
	<i>Pteralyxia macrocarpa</i> .....	<i>Pteralyxia macrocarpa</i>
	<i>Schiedea hookeri</i> .....	<i>Sanicula mariversa</i>
	<i>Schiedea kaalae</i> .....	<i>Schiedea hookeri</i>
	<i>Schiedea nuttallii</i> .....	<i>Schiedea kaalae</i>
	<i>Schiedea obovata</i> .....	<i>Schiedea nuttallii</i>
		<i>Schiedea obovata</i>
		<i>Silene perlmanni</i>
		<i>Solanum sandwicense</i>
		<i>Stenogyne kanehoana</i>
		<i>Tetramolopium lepidotum</i> ssp. <i>lepidotum</i>
		<i>Urena kaalae</i>
	<i>Viola chamissoniana</i> ssp. <i>Chamissoniana</i> .	<i>Viola chamissoniana</i> ssp. <i>chamissoniana</i>
	<i>Abutilon sandwicense</i> .....	<i>Abutilon sandwicense</i>
	<i>Alectryon macrococcus</i> .....	<i>Alectryon macrococcus</i>
	<i>Cenchrus agrimonoides</i> .....	<i>Bonamia menziesii</i>
	<i>Chamaesyce herbstii</i> .....	<i>Cenchrus agrimonoides</i>
		<i>Chamaesyce elastica</i> var. <i>kaenana</i>
		<i>Chamaesyce herbstii</i>
		<i>Colubrina oppositifolia</i>
		<i>Ctenitis squamigera</i>
	<i>Cyanea calycina</i> .....	<i>Cyanea acuminata</i>
	<i>Cyanea grimesiana</i> ssp. <i>Obatae</i> .....	<i>Cyanea calycina</i>
		<i>Cyanea grimesiana</i> ssp. <i>grimesiana</i>
		<i>Cyanea grimesiana</i> ssp. <i>obatae</i>
		<i>Cyanea longiflora</i>
		<i>Cyanea pinnatifida</i>
		<i>Cyanea superba</i>
		<i>Cyperus pannatifloris</i>
		<i>Cyrtonya dentata</i>
	<i>Delissea subcordata</i> .....	<i>Delissea subcordata</i>
	<i>Diellia falcata</i> .....	<i>Diellia falcata</i>
		<i>Diellia unisora</i>
		<i>Diplazium molokaiense</i>
		<i>Dubautia herbstobatae</i>
		<i>Eragrostis fosbergii</i>
		<i>Eugenia koolauensis</i>
		<i>Euphorbia haeeleleana</i>
		<i>Flueggea neowawraea</i>

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(35) TABLE OF PROTECTED SPECIES WITHIN EACH CRITICAL HABITAT UNIT FOR OAHU—Continued

Unit name	Species occupied	Species unoccupied
Oahu—Lowland Mesic—Unit 3		
	<i>Gardenia mannii</i> .....	<i>Gardenia mannii</i> <i>Gouania meyenii</i> <i>Gouania vitifolia</i> <i>Hesperomannia arborescens</i> <i>Hesperomannia arbuscula</i> <i>Hibiscus brackenridgei</i> <i>Isodendrion laurifolium</i> <i>Isodendrion longifolium</i> <i>Kadua coriacea</i> <i>Kadua degeneri</i> <i>Kadua parvula</i> <i>Labordia cyrtandrae</i> <i>Lobelia niihauensis</i> <i>Melanthera tenuifolia</i> <i>Melicope makahae</i> <i>Melicope pallida</i> <i>Melicope saint-johnii</i> <i>Neraudia angulata</i> <i>Nototrichium humile</i> <i>Phyllostegia hirsuta</i> <i>Phyllostegia kaalaensis</i> <i>Phyllostegia mollis</i> <i>Phyllostegia parviflora</i> <i>Plantago princeps</i> <i>Platidesma cornuta</i> var. <i>decurrens</i> .....
	<i>Pleomele forbesii</i> .....	<i>Platidesma cornuta</i> var. <i>decurrens</i> <i>Pleomele forbesii</i>
	<i>Pteralyxia macrocarpa</i> .....	<i>Pteralyxia macrocarpa</i>
	<i>Schiedea hookeri</i> .....	<i>Sanicula mariversa</i>
	<i>Schiedea kaalae</i> .....	<i>Schiedea hookeri</i> <i>Schiedea kaalae</i> <i>Schiedea nuttallii</i> <i>Schiedea obovata</i> <i>Silene perlmutteri</i>
	<i>Solanum sandwicense</i> .....	<i>Solanum sandwicense</i>
	<i>Stenogyne kanehoana</i> .....	<i>Stenogyne kanehoana</i>
	<i>Urera kaalae</i> .....	<i>Tetramolopium lepidotum</i> ssp. <i>lepidotum</i> <i>Urera kaalae</i> <i>Viola chamissoniana</i> ssp. <i>chamissoniana</i>
	<i>Alectryon macrococcus</i> .....	<i>Abutilon sandwicense</i> <i>Alectryon macrococcus</i>
	<i>Cenchrus agrimonoides</i> .....	<i>Bonamia menziesii</i> <i>Cenchrus agrimonoides</i> <i>Chamaesyce celastroides</i> var. <i>kaenana</i> <i>Chamaesyce herbstii</i> <i>Colubrina oppositifolia</i> <i>Ctenitis squamigera</i> <i>Cyanea acuminata</i> <i>Cyanea calycina</i> <i>Cyanea grimesiana</i> ssp. <i>grimesiana</i> <i>Cyanea grimesiana</i> ssp. <i>obatae</i> <i>Cyanea longiflora</i> <i>Cyanea pinnatifida</i> <i>Cyanea superba</i> <i>Cyperus pannatiflorus</i> <i>Cyrtandra dentata</i>
	<i>Delissea subcordata</i> .....	<i>Delissea subcordata</i>
	<i>Diellia falcata</i> .....	<i>Diellia falcata</i>
	<i>Diellia unisora</i> .....	<i>Diellia unisora</i>
	<i>Hesperomannia arbuscula</i> .....	<i>Diplazium molokaiense</i> <i>Dubautia herbistobatae</i> <i>Eragrostis fosbergii</i> <i>Eugenia koolauensis</i> <i>Euphorbia haeleleleana</i> <i>Flueggea neowawraea</i> <i>Gardenia manii</i> <i>Gouania meyenii</i> <i>Gouania vitifolia</i> <i>Hesperomannia arborescens</i> <i>Hesperomannia arbuscula</i> <i>Hibiscus brackenridgei</i> <i>Isodendrion laurifolium</i>

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(35) TABLE OF PROTECTED SPECIES WITHIN EACH CRITICAL HABITAT UNIT FOR OAHU—Continued

Unit name	Species occupied	Species unoccupied
Oahu—Lowland Mesic—Unit 4		<i>Isodendrion longifolium</i> <i>Kadua coriacea</i> <i>Kadua degeneri</i> <i>Kadua parvula</i> <i>Labordia cyrtandrae</i> <i>Lobelia niihauensis</i> <i>Melanthera tenuifolia</i> <i>Melicope makahae</i> <i>Melicope pallida</i> <i>Melicope saint-johnii</i> <i>Neraudia angulata</i> <i>Nototrichium humile</i> <i>Phyllostegia hirsuta</i> <i>Phyllostegia kaalaensis</i> <i>Phyllostegia mollis</i> <i>Phyllostegia parviflora</i> <i>Plantago princeps</i> <i>Platidesma cornuta</i> var. <i>decurrens</i> <i>Pleomele forbesii</i> <i>Pteralyxia macrocarpa</i> <i>Sanicula mariversa</i> <i>Schiedea hookeri</i> <i>Schiedea kaalae</i> <i>Schiedea nuttallii</i> <i>Schiedea obovata</i> <i>Silene perlmutteri</i> <i>Solanum sandwicense</i> <i>Stenogyne kanehoana</i> <i>Tetramolopium lepidotum</i> ssp. <i>lepidotum</i> <i>Urera kaalae</i> <i>Viola chamissoniana</i> ssp. <i>chamissoniana</i>
Oahu—Lowland Mesic—Unit 5		<i>Alectryon macrococcus</i> <i>Bonamia menziesii</i> <i>Chamaesyce celastroides</i> var. <i>kaenana</i> <i>Ctenitis squamigera</i> <i>Cyanea acuminata</i> <i>Cyanea calycina</i> <i>Cyanea crispa</i> <i>Cyanea grimesiana</i> ssp. <i>grimesiana</i> <i>Cyanea lanceolata</i> <i>Cyanea longiflora</i> <i>Cyanea truncata</i> <i>Cyrtandra dentata</i> <i>Cyrtandra polyantha</i> <i>Delissea subcordata</i> <i>Diellia erecta</i> <i>Diellia falcate</i> <i>Eugenia koolauensis</i> <i>Gardenia manii</i> <i>Hesperomannia arborescens</i> <i>Isodendrion laurifolium</i> <i>Isodendrion longifolium</i> <i>Kadua coriacea</i> <i>Labordia cyrtandrae</i> <i>Lobelia monostachya</i> <i>Melicope lydgatei</i> <i>Melicope saint-johnii</i> <i>Phyllostegia hirsuta</i> <i>Phyllostegia mollis</i> <i>Phyllostegia parviflora</i> <i>Plantago princeps</i> <i>Pleomele forbesii</i> <i>Pteralyxia macrocarpa</i> <i>Schiedea kaalae</i> <i>Schiedea nuttallii</i> <i>Solanum sandwicense</i> <i>Tetraplasandra gymnocarpa</i> <i>Tetraplasandra lydgatei</i>

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(35) TABLE OF PROTECTED SPECIES WITHIN EACH CRITICAL HABITAT UNIT FOR OAHU—Continued

Unit name	Species occupied	Species unoccupied
Oahu—Lowland Mesic—Unit 6		<i>Chamaesyce celastroides</i> var. <i>kaenana</i> <i>Ctenitis squamigera</i> <i>Cyanea acuminata</i> <i>Cyanea calycina</i> <i>Cyanea crispa</i> <i>Cyanea grimesiana</i> ssp. <i>grimesiana</i> <i>Cyanea lanceolata</i> <i>Cyanea longiflora</i> <i>Cyanea truncata</i> <i>Cyrtandra dentata</i> <i>Cyrtandra polyantha</i> <i>Delissea subcordata</i> <i>Dielia erecta</i> <i>Dielia falcata</i> <i>Eugenia koolauensis</i> <i>Gardenia mannii</i> <i>Hesperomannia arborescens</i> <i>Isodendrion laurifolium</i> <i>Isodendrion longifolium</i> <i>Kadua coriacea</i> <i>Labordia cyrtandrae</i> <i>Lobelia monostachya</i> <i>Melicope lydgatei</i> <i>Melicope saint-johnii</i> <i>Phyllostegia hirsuta</i> <i>Phyllostegia mollis</i> <i>Phyllostegia parviflora</i> <i>Plantago princeps</i> <i>Pleomele forbesii</i> <i>Pteralyxia macrocarpa</i> <i>Schiiedea kaalae</i> <i>Schiiedea nuttallii</i> <i>Solanum sandwicense</i> <i>Tetraplasandra gymnocarpa</i> <i>Tetraplasandra lydgatei</i>  <i>Alectryon macrococcus</i> <i>Bonamia menziesii</i> <i>Chamaesyce celastroides</i> var. <i>kaenana</i> <i>Ctenitis squamigera</i> <i>Cyanea acuminata</i> <i>Cyanea calycina</i> <i>Cyanea crispa</i> <i>Cyanea grimesiana</i> ssp. <i>grimesiana</i> <i>Cyanea lanceolata</i> <i>Cyanea longiflora</i> <i>Cyanea truncata</i> <i>Cyrtandra dentata</i> <i>Cyrtandra polyantha</i> <i>Delissea subcordata</i> <i>Dielia erecta</i> <i>Dielia falcata</i> <i>Eugenia koolauensis</i> <i>Gardenia mannii</i> <i>Hesperomannia arborescens</i> <i>Isodendrion laurifolium</i> <i>Isodendrion longifolium</i> <i>Kadua coriacea</i> <i>Labordia cyrtandrae</i> <i>Lobelia monostachya</i> <i>Melicope lydgatei</i> <i>Melicope saint-johnii</i> <i>Phyllostegia hirsuta</i> <i>Phyllostegia mollis</i> <i>Phyllostegia parviflora</i> <i>Plantago princeps</i> <i>Pleomele forbesii</i> <i>Pteralyxia macrocarpa</i> <i>Schiiedea kaalae</i> <i>Schiiedea nuttallii</i> <i>Solanum sandwicense</i> <i>Tetraplasandra gymnocarpa</i>
	<i>Cyanea acuminata</i> ..... <i>Cyanea crispa</i> ..... <i>Cyanea truncata</i> .....  <i>Gardenia mannii</i> .....  <i>Pteralyxia macrocarpa</i> ..... <i>Schiiedea kaalae</i> .....	<i>Alectryon macrococcus</i> <i>Bonamia menziesii</i> <i>Chamaesyce celastroides</i> var. <i>kaenana</i> <i>Ctenitis squamigera</i> <i>Cyanea acuminata</i> <i>Cyanea calycina</i> <i>Cyanea crispa</i> <i>Cyanea grimesiana</i> ssp. <i>grimesiana</i> <i>Cyanea lanceolata</i> <i>Cyanea longiflora</i> <i>Cyanea truncata</i> <i>Cyrtandra dentata</i> <i>Cyrtandra polyantha</i> <i>Delissea subcordata</i> <i>Dielia erecta</i> <i>Dielia falcata</i> <i>Eugenia koolauensis</i> <i>Gardenia mannii</i> <i>Hesperomannia arborescens</i> <i>Isodendrion laurifolium</i> <i>Isodendrion longifolium</i> <i>Kadua coriacea</i> <i>Labordia cyrtandrae</i> <i>Lobelia monostachya</i> <i>Melicope lydgatei</i> <i>Melicope saint-johnii</i> <i>Phyllostegia hirsuta</i> <i>Phyllostegia mollis</i> <i>Phyllostegia parviflora</i> <i>Plantago princeps</i> <i>Pleomele forbesii</i> <i>Pteralyxia macrocarpa</i> <i>Schiiedea kaalae</i> <i>Schiiedea nuttallii</i> <i>Solanum sandwicense</i> <i>Tetraplasandra gymnocarpa</i>

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(35) TABLE OF PROTECTED SPECIES WITHIN EACH CRITICAL HABITAT UNIT FOR OAHU—Continued

Unit name	Species occupied	Species unoccupied
Oahu—Lowland Mesic—Unit 7		<i>Tetraplasandra lydgatei</i> <i>Alectryon macrococcus</i> <i>Bonamia menziesii</i> <i>Chamaesyce celastroides</i> var. <i>kaenana</i> <i>Ctenitis squamigera</i> <i>Cyanea acuminata</i> <i>Cyanea calycina</i> <i>Cyanea crispa</i> <i>Cyanea grimesiana</i> ssp. <i>Grimesiana</i> <i>Cyanea lanceolata</i> <i>Cyrtandra polyantha</i> <i>Diellia erecta</i> <i>Lobelia monostachya</i> <i>Pleomele forbesii</i> <i>Pteralyxia macrocarpa</i> <i>Tetraplasandra lydgatei</i>
Oahu—Lowland Wet—Unit 1		<i>Cyanea acuminata</i> <i>Cyanea calycina</i> <i>Cyanea grimesiana</i> ssp. <i>grimesiana</i> <i>Cyanea grimesiana</i> ssp. <i>obatae</i> <i>Cyrtandra dentata</i> <i>Diplazium molokaiense</i> <i>Gardenia mannii</i> <i>Gouania vitifolia</i> <i>Hesperomannia arbuscula</i> <i>Isodendrion longifolium</i> <i>Labordia cyrtandrae</i> <i>Lobelia oahuensis</i> <i>Phyllostegia hirsuta</i> <i>Phyllostegia mollis</i> <i>Plantago princeps</i> <i>Pteralyxia macrocarpa</i> <i>Schiedea hookeri</i> <i>Urera kaalae</i>
Oahu—Lowland Wet—Unit 2		<i>Cyanea acuminata</i> <i>Cyanea calycina</i> <i>Cyanea grimesiana</i> ssp. <i>grimesiana</i> <i>Cyanea grimesiana</i> ssp. <i>obatae</i> <i>Cyrtandra dentata</i> <i>Diplazium molokaiense</i> <i>Gardenia mannii</i> <i>Gouania vitifolia</i> <i>Hesperomannia arbuscula</i> <i>Isodendrion longifolium</i> <i>Labordia cyrtandrae</i> <i>Lobelia oahuensis</i>

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(35) TABLE OF PROTECTED SPECIES WITHIN EACH CRITICAL HABITAT UNIT FOR OAHU—Continued

Unit name	Species occupied	Species unoccupied
Oahu—Lowland Wet—Unit 3	<p><i>Phyllostegia hirsute</i> .....</p> <p><i>Phyllostegia mollis</i> .....</p> <p><i>Urera kaalae</i> .....</p> <p><i>Phyllostegia hirsute</i> .....</p> <p><i>Phyllostegia mollis</i> .....</p> <p><i>Schiadea hookeri</i> .....</p>	<p><i>Phyllostegia hirsuta</i></p> <p><i>Phyllostegia mollis</i></p> <p><i>Plantago princeps</i></p> <p><i>Pteralyxia macrocarpa</i></p> <p><i>Schiadea hookeri</i></p> <p><i>Schiadea kaalae</i></p> <p><i>Urera kaalae</i></p> <p><i>Cyanea acuminata</i></p> <p><i>Cyanea calycina</i></p> <p><i>Cyanea grimesiana</i> ssp. <i>grimesiana</i></p> <p><i>Cyanea grimesiana</i> ssp. <i>obatae</i></p> <p><i>Cyrtandra dentata</i></p> <p><i>Diplazium molokaiense</i></p> <p><i>Gardenia mannii</i></p> <p><i>Gouania vitifolia</i></p> <p><i>Hesperomannia arbuscula</i></p> <p><i>Isodendron longifolium</i></p> <p><i>Labordia cyrtandrae</i></p> <p><i>Lobelia oahuensis</i></p> <p><i>Phyllostegia hirsuta</i></p> <p><i>Phyllostegia mollis</i></p> <p><i>Plantago princeps</i></p> <p><i>Pteralyxia macrocarpa</i></p> <p><i>Schiadea hookeri</i></p> <p><i>Schiadea kaalae</i></p> <p><i>Urera kaalae</i></p>
Oahu—Lowland Wet—Unit 4	<p><i>Phyllostegia hirsute</i> .....</p> <p><i>Phyllostegia mollis</i> .....</p> <p><i>Schiadea hookeri</i> .....</p> <p><i>Phyllostegia mollis</i> .....</p>	<p><i>Cyanea acuminata</i></p> <p><i>Cyanea calycina</i></p> <p><i>Cyanea grimesiana</i> ssp. <i>grimesiana</i></p> <p><i>Cyanea grimesiana</i> ssp. <i>obatae</i></p> <p><i>Cyrtandra dentata</i></p> <p><i>Diplazium molokaiense</i></p> <p><i>Gardenia mannii</i></p> <p><i>Gouania vitifolia</i></p> <p><i>Hesperomannia arbuscula</i></p> <p><i>Isodendron longifolium</i></p> <p><i>Labordia cyrtandrae</i></p> <p><i>Lobelia oahuensis</i></p> <p><i>Phyllostegia hirsuta</i></p> <p><i>Phyllostegia mollis</i></p> <p><i>Plantago princeps</i></p> <p><i>Pteralyxia macrocarpa</i></p> <p><i>Schiadea hookeri</i></p> <p><i>Schiadea kaalae</i></p> <p><i>Urera kaalae</i></p>
Oahu—Lowland Wet—Unit 5	<p><i>Cyanea calycina</i> .....</p> <p><i>Cyanea grimesiana</i> ssp. <i>Obatae</i> .....</p> <p><i>Hesperomannia arbuscula</i> .....</p> <p><i>Schiadea kaalae</i> .....</p>	<p><i>Cyanea acuminata</i></p> <p><i>Cyanea calycina</i></p> <p><i>Cyanea grimesiana</i> ssp. <i>grimesiana</i></p> <p><i>Cyanea grimesiana</i> ssp. <i>obatae</i></p> <p><i>Cyrtandra dentata</i></p> <p><i>Diplazium molokaiense</i></p> <p><i>Gardenia mannii</i></p> <p><i>Gouania vitifolia</i></p> <p><i>Hesperomannia arbuscula</i></p> <p><i>Isodendron longifolium</i></p> <p><i>Labordia cyrtandrae</i></p> <p><i>Lobelia oahuensis</i></p> <p><i>Phyllostegia hirsuta</i></p> <p><i>Phyllostegia mollis</i></p> <p><i>Plantago princeps</i></p> <p><i>Pteralyxia macrocarpa</i></p> <p><i>Schiadea hookeri</i></p> <p><i>Schiadea kaalae</i></p> <p><i>Urera kaalae</i></p>
Oahu—Lowland Wet—Unit 6		<p><i>Adenophorus periens</i></p> <p><i>Chamaesyce rockii</i></p> <p><i>Cyanea acuminata</i></p> <p><i>Cyanea calycina</i></p>

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(35) TABLE OF PROTECTED SPECIES WITHIN EACH CRITICAL HABITAT UNIT FOR OAHU—Continued

Unit name	Species occupied	Species unoccupied
Oahu—Lowland Wet—Unit 7		<i>Cyanea crispa</i> <i>Cyanea grimesiana</i> ssp. <i>grimesiana</i> <i>Cyanea humboldtiana</i> <i>Cyanea koolauensis</i> <i>Cyanea lanceolata</i> <i>Cyanea purpurellifolia</i> <i>Cyanea st.-johnnii</i> <i>Cyanea truncata</i> <i>Cyrtandra dentata</i> <i>Cyrtandra gracilis</i> <i>Cyrtandra kaulantha</i> <i>Cyrtandra polyantha</i> <i>Cyrtandra sessilis</i> <i>Cyrtandra subumbellata</i> <i>Cyrtandra viridiflora</i> <i>Cyrtandra waiolani</i> <i>Gardenia manni</i> <i>Hesperomannia arborescens</i> <i>Huperzia nutans</i> <i>Isodendrion longifolium</i> <i>Labordia cyrtandrae</i> <i>Lobelia gaudichaudii</i> ssp. <i>koolauensis</i> <i>Lobelia oahuensis</i> <i>Melicope hiakae</i> <i>Melicope lydgatei</i> <i>Myrsine judii</i> <i>Phyllostegia hirsuta</i> <i>Phyllostegia parviflora</i> <i>Plantago princeps</i> <i>Platanthera holochila</i> <i>Platysesma cornuta</i> var. <i>cornuta</i> <i>Psychotria hexandra</i> ssp. <i>oahuensis</i> <i>Pteralyxia macrocarpa</i> <i>Pteris lidgatei</i> <i>Sanicula purpurea</i> <i>Tetraplasandra gymnocarpa</i> <i>Trematolobelia singularis</i> <i>Viola oahuensis</i> <i>Zanthoxylum oahuense</i>  <i>Adenophorus periens</i> <i>Chamaesyce rockii</i> <i>Cyanea acuminata</i> <i>Cyanea calycina</i> <i>Cyanea crispa</i> <i>Cyanea grimesiana</i> ssp. <i>grimesiana</i> <i>Cyanea humboldtiana</i> <i>Cyanea koolauensis</i> <i>Cyanea lanceolata</i> <i>Cyanea purpurellifolia</i> <i>Cyanea st.-johnnii</i> <i>Cyanea truncata</i> <i>Cyrtandra dentata</i> <i>Cyrtandra gracilis</i> <i>Cyrtandra kaulantha</i> <i>Cyrtandra polyantha</i> <i>Cyrtandra sessilis</i> <i>Cyrtandra subumbellata</i> <i>Cyrtandra viridiflora</i> <i>Cyrtandra waiolani</i> <i>Gardenia manni</i> <i>Hesperomannia arborescens</i> <i>Huperzia nutans</i> <i>Isodendrion longifolium</i> <i>Labordia cyrtandrae</i> <i>Lobelia gaudichaudii</i> ssp. <i>koolauensis</i> <i>Lobelia oahuensis</i> <i>Melicope hiakae</i> <i>Melicope lydgatei</i> <i>Myrsine judii</i> <i>Phyllostegia hirsuta</i> <i>Phyllostegia parviflora</i>
	<i>Chamaesyce rockii</i> <i>Cyanea acuminata</i> <i>Cyanea calycina</i>  <i>Cyanea humboldtiana</i>  <i>Cyanea purpurellifolia</i>  <i>Cyanea truncate</i>   <i>Cyrtandra viridiflora</i>  <i>Gardenia manni</i> <i>Hesperomannia arborescens</i> <i>Huperzia nutans</i>  <i>Myrsine judii</i> <i>Phyllostegia hirsute</i>	

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(35) TABLE OF PROTECTED SPECIES WITHIN EACH CRITICAL HABITAT UNIT FOR OAHU—Continued

Unit name	Species occupied	Species unoccupied
Oahu—Lowland Wet—Unit 8	<i>Platidesma cornuta</i> var. <i>cornuta</i> .....	<i>Plantago princeps</i> <i>Platanthera holochila</i> <i>Platidesma cornuta</i> var. <i>cornuta</i> <i>Psychotria hexandra</i> ssp. <i>oahuensis</i> <i>Pteralyxia macrocarpa</i> <i>Pteris lidgatei</i> <i>Sanicula purpurea</i> <i>Tetraplasandra gymnocarpa</i> <i>Trematolobelia singularis</i> <i>Viola oahuensis</i> <i>Zanthoxylum oahuense</i>
Oahu—Lowland Wet—Unit 9	<i>Cyrtandra kaulantha</i> .....	<i>Adenophorus periens</i> <i>Chamaesyce rockii</i> <i>Cyanea acuminata</i> <i>Cyanea calycina</i> <i>Cyanea crispa</i> <i>Cyanea grimesiana</i> ssp. <i>grimesiana</i> <i>Cyanea humboldtiana</i> <i>Cyanea koolauensis</i> <i>Cyanea lanceolata</i> <i>Cyanea purpurellifolia</i> <i>Cyanea st.-johnii</i> <i>Cyanea truncata</i> <i>Cyrtandra dentata</i> <i>Cyrtandra gracilis</i> <i>Cyrtandra kaulantha</i> <i>Cyrtandra polyantha</i> <i>Cyrtandra sessilis</i> <i>Cyrtandra subumbellata</i> <i>Cyrtandra viridiflora</i> <i>Cyrtandra waiolani</i> <i>Gardenia mannii</i> <i>Hesperomannia arborescens</i> <i>Huperzia nutans</i> <i>Isodendrion longifolium</i> <i>Labordia cyrtandrae</i> <i>Lobelia gaudichaudii</i> ssp. <i>koolauensis</i> <i>Lobelia oahuensis</i> <i>Melicope hiaakae</i> <i>Melicope lydgatei</i> <i>Myrsine judii</i> <i>Phyllostegia hirsuta</i> <i>Phyllostegia parviflora</i> <i>Plantago princeps</i> <i>Platanthera holochila</i> <i>Platidesma cornuta</i> var. <i>cornuta</i> <i>Psychotria hexandra</i> ssp. <i>oahuensis</i> <i>Pteralyxia macrocarpa</i> <i>Pteris lidgatei</i> <i>Sanicula purpurea</i> <i>Tetraplasandra gymnocarpa</i> <i>Trematolobelia singularis</i> <i>Viola oahuensis</i> <i>Zanthoxylum oahuense</i>
	<i>Chamaesyce rockii</i> .....	<i>Adenophorus periens</i> <i>Chamaesyce rockii</i> <i>Cyanea acuminata</i> <i>Cyanea calycina</i> <i>Cyanea crispa</i> <i>Cyanea grimesiana</i> ssp. <i>grimesiana</i> <i>Cyanea humboldtiana</i> <i>Cyanea koolauensis</i> <i>Cyanea lanceolata</i> <i>Cyanea purpurellifolia</i> <i>Cyanea st.-johnii</i> <i>Cyanea truncata</i> <i>Cyrtandra dentata</i> <i>Cyrtandra gracilis</i> <i>Cyrtandra kaulantha</i> <i>Cyrtandra polyantha</i>

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(35) TABLE OF PROTECTED SPECIES WITHIN EACH CRITICAL HABITAT UNIT FOR OAHU—Continued

Unit name	Species occupied	Species unoccupied
Oahu—Lowland Wet—Unit 10		<i>Cyrtandra sessilis</i> <i>Cyrtandra subumbellata</i> <i>Cyrtandra viridiflora</i> <i>Cyrtandra waiolani</i> <i>Gardenia manni</i> <i>Hesperomannia arborescens</i> <i>Huperzia nutans</i> <i>Isodendrion longifolium</i> <i>Labordia cyrtandrae</i> <i>Lobelia gaudichaudii</i> ssp. <i>koolauensis</i> <i>Lobelia oahuensis</i> <i>Melicope hiakae</i> <i>Melicope lydgatei</i> <i>Myrsine judii</i> <i>Phyllostegia hirsuta</i> <i>Phyllostegia parviflora</i> <i>Plantago princeps</i> <i>Platanthera holochila</i> <i>Platydesma cornuta</i> var. <i>cornuta</i> <i>Psychotria hexandra</i> ssp. <i>oahuensis</i> <i>Pteralyxia macrocarpa</i> <i>Pteris lidgatei</i> <i>Sanicula purpurea</i> <i>Tetraplasandra gymnocarpa</i> <i>Trematolobelia singularis</i> <i>Viola oahuensis</i> <i>Zanthoxylum oahuense</i>  <i>Adenophorus periens</i> <i>Chamaesyce rockii</i> <i>Cyanea acuminata</i> <i>Cyanea calycina</i> <i>Cyanea crispa</i> <i>Cyanea grimesiana</i> ssp. <i>grimesiana</i> <i>Cyanea humboldtiana</i> <i>Cyanea koolauensis</i> <i>Cyanea lanceolata</i> <i>Cyanea purpurellifolia</i> <i>Cyanea st.-johnnii</i> <i>Cyanea truncata</i> <i>Cyrtandra dentata</i> <i>Cyrtandra gracilis</i> <i>Cyrtandra kaulantha</i> <i>Cyrtandra polyantha</i> <i>Cyrtandra sessilis</i> <i>Cyrtandra subumbellata</i> <i>Cyrtandra viridiflora</i> <i>Cyrtandra waiolani</i> <i>Gardenia manni</i> <i>Hesperomannia arborescens</i> <i>Huperzia nutans</i> <i>Isodendrion longifolium</i> <i>Labordia cyrtandrae</i> <i>Lobelia gaudichaudii</i> ssp. <i>koolauensis</i> <i>Lobelia oahuensis</i> <i>Melicope hiakae</i> <i>Melicope lydgatei</i> <i>Myrsine judii</i> <i>Phyllostegia hirsuta</i> <i>Phyllostegia parviflora</i> <i>Plantago princeps</i> <i>Platanthera holochila</i> <i>Platydesma cornuta</i> var. <i>cornuta</i> <i>Psychotria hexandra</i> ssp. <i>oahuensis</i> <i>Pteralyxia macrocarpa</i> <i>Pteris lidgatei</i> <i>Sanicula purpurea</i> <i>Tetraplasandra gymnocarpa</i> <i>Trematolobelia singularis</i> <i>Viola oahuensis</i> <i>Zanthoxylum oahuense</i>
Oahu—Lowland Wet—Unit 11		

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(35) TABLE OF PROTECTED SPECIES WITHIN EACH CRITICAL HABITAT UNIT FOR OAHU—Continued

Unit name	Species occupied	Species unoccupied
Oahu—Lowland Wet—Unit 12		<i>Adenophorus periens</i> <i>Chamaesyce rockii</i> <i>Cyanea acuminata</i> <i>Cyanea calycina</i> <i>Cyanea crispa</i> <i>Cyanea grimesiana</i> ssp. <i>grimesiana</i> <i>Cyanea humboldtiana</i> <i>Cyanea koolauensis</i> <i>Cyanea lanceolata</i> <i>Cyanea purpurellifolia</i> <i>Cyanea st.-johnnii</i> <i>Cyanea truncata</i> <i>Cyrtandra dentata</i> <i>Cyrtandra gracilis</i> <i>Cyrtandra kaulantha</i> <i>Cyrtandra polyantha</i> <i>Cyrtandra sessilis</i> <i>Cyrtandra subumbellata</i> <i>Cyrtandra viridiflora</i> <i>Cyrtandra waiolani</i> <i>Gardenia mannii</i> <i>Hesperomannia arborescens</i> <i>Huperzia nutans</i> <i>Isodendrion longifolium</i> <i>Labordia cyrtandrae</i> <i>Lobelia gaudichaudii</i> ssp. <i>koolauensis</i> <i>Lobelia oahuensis</i> <i>Melicope hawaiiensis</i> <i>Melicope lydgatiae</i> <i>Myrsine juddii</i> <i>Phyllostegia hirsuta</i> <i>Phyllostegia parviflora</i> <i>Plantago princeps</i> <i>Platanthera holochila</i> <i>Platysesma cornuta</i> var. <i>cornuta</i> <i>Psychotria hexandra</i> ssp. <i>oahuensis</i> <i>Pteralyxia macrocarpa</i> <i>Pteris lidgatei</i> <i>Sanicula purpurea</i> <i>Tetraplasandra gymnocarpa</i> <i>Trematolobelia singularis</i> <i>Viola oahuensis</i> <i>Zanthoxylum oahuense</i>
		<i>Adenophorus periens</i> <i>Chamaesyce rockii</i> <i>Cyanea acuminata</i> <i>Cyanea calycina</i> <i>Cyanea crispa</i> <i>Cyanea grimesiana</i> ssp. <i>grimesiana</i> <i>Cyanea humboldtiana</i> <i>Cyanea koolauensis</i> <i>Cyanea lanceolata</i> <i>Cyanea purpurellifolia</i> <i>Cyanea st.-johnnii</i> <i>Cyanea truncata</i> <i>Cyrtandra dentata</i> <i>Cyrtandra gracilis</i> <i>Cyrtandra kaulantha</i> <i>Cyrtandra polyantha</i> <i>Cyrtandra sessilis</i> <i>Cyrtandra subumbellata</i> <i>Cyrtandra viridiflora</i> <i>Cyrtandra waiolani</i> <i>Gardenia mannii</i> <i>Hesperomannia arborescens</i> <i>Huperzia nutans</i> <i>Isodendrion longifolium</i> <i>Labordia cyrtandrae</i> <i>Lobelia gaudichaudii</i> ssp. <i>koolauensis</i> <i>Lobelia oahuensis</i> <i>Melicope hawaiiensis</i>

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(35) TABLE OF PROTECTED SPECIES WITHIN EACH CRITICAL HABITAT UNIT FOR OAHU—Continued

Unit name	Species occupied	Species unoccupied
Oahu—Lowland Wet—Unit 13		<i>Melicope lydgatei</i> <i>Myrsine judii</i> <i>Phyllostegia hirsuta</i> <i>Phyllostegia parviflora</i> <i>Plantago princeps</i> <i>Platanthera holochila</i> <i>Platidesma cornuta</i> var. <i>cornuta</i> <i>Psychotria hexandra</i> ssp. <i>oahuensis</i> <i>Pteralyxia macrocarpa</i> <i>Pteris lidgatei</i> <i>Sanicula purpurea</i> <i>Tetraplasandra gymnocarpa</i> <i>Trematolobelia singularis</i> <i>Viola oahuensis</i> <i>Zanthoxylum oahuense</i>  <i>Adenophorus periens</i> <i>Chamaesyce rockii</i> <i>Cyanea acuminata</i> <i>Cyanea calycina</i> <i>Cyanea crispa</i> <i>Cyanea grimesiana</i> ssp. <i>grimesiana</i> <i>Cyanea humboldtiana</i> <i>Cyanea koolauensis</i> <i>Cyanea lanceolata</i> <i>Cyanea purpurellifolia</i> <i>Cyanea st.-johnii</i> <i>Cyanea truncata</i> <i>Cyrtandra dentata</i> <i>Cyrtandra gracilis</i> <i>Cyrtandra kaulantha</i> <i>Cyrtandra polyantha</i> <i>Cyrtandra sessilis</i> <i>Cyrtandra subumbellata</i> <i>Cyrtandra viridiflora</i> <i>Cyrtandra waiolani</i> <i>Gardenia manni</i> <i>Hesperomea arborescens</i> <i>Huperzia nutans</i> <i>Isodendrion longifolium</i> <i>Labordia cyrtandrae</i> <i>Lobelia gaudichaudii</i> ssp. <i>koolauensis</i> <i>Lobelia oahuensis</i> <i>Melicope hiakae</i> <i>Melicope lydgatei</i> <i>Myrsine judii</i> <i>Phyllostegia hirsuta</i> <i>Phyllostegia parviflora</i> <i>Plantago princeps</i> <i>Platanthera holochila</i> <i>Platidesma cornuta</i> var. <i>cornuta</i> <i>Psychotria hexandra</i> ssp. <i>oahuensis</i> <i>Pteralyxia macrocarpa</i> <i>Pteris lidgatei</i> <i>Sanicula purpurea</i> <i>Tetraplasandra gymnocarpa</i> <i>Trematolobelia singularis</i> <i>Viola oahuensis</i> <i>Zanthoxylum oahuense</i>  <i>Adenophorus periens</i> <i>Chamaesyce rockii</i> <i>Cyanea acuminata</i> <i>Cyanea calycina</i> <i>Cyanea crispa</i> <i>Cyanea grimesiana</i> ssp. <i>grimesiana</i> <i>Cyanea humboldtiana</i> <i>Cyanea koolauensis</i> <i>Cyanea lanceolata</i> <i>Cyanea purpurellifolia</i> <i>Cyanea st.-johnii</i> <i>Cyanea truncata</i>
Oahu—Lowland Wet—Unit 14		<i>Cyanea koolauensis</i> .... 

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(35) TABLE OF PROTECTED SPECIES WITHIN EACH CRITICAL HABITAT UNIT FOR OAHU—Continued

Unit name	Species occupied	Species unoccupied
Oahu—Lowland Wet—Unit 15		<i>Cyrtandra dentata</i> <i>Cyrtandra gracilis</i> <i>Cyrtandra kaulantha</i> <i>Cyrtandra polyantha</i> <i>Cyrtandra sessilis</i> <i>Cyrtandra subumbellata</i> <i>Cyrtandra viridiflora</i> <i>Cyrtandra waiolani</i> <i>Gardenia mannii</i> <i>Hesperomannia arborescens</i> <i>Huperzia nutans</i> <i>Isodendrion longifolium</i> <i>Labordia cyrtandrae</i> <i>Lobelia gaudichaudii</i> ssp. <i>koolauensis</i> <i>Lobelia oahuensis</i> <i>Melicope hiaakae</i> <i>Melicope lydgatei</i> <i>Myrsine judii</i> <i>Phyllostegia hirsuta</i> <i>Phyllostegia parviflora</i> <i>Plantago princeps</i> <i>Platanthera holochila</i> <i>Platidesma cornuta</i> var. <i>cornuta</i> <i>Psychotria hexandra</i> ssp. <i>oahuensis</i> <i>Pteralyxia macrocarpa</i> <i>Pteris lidgatei</i> <i>Sanicula purpurea</i> <i>Tetraplasandra gymnocarpa</i> <i>Trematolobelia singularis</i> <i>Viola oahuensis</i> <i>Zanthoxylum oahuense</i>  <i>Adenophorus perakensis</i> <i>Chamaesyce rockii</i> <i>Cyanea acuminata</i> <i>Cyanea calycina</i> <i>Cyanea crispa</i> <i>Cyanea grimesiana</i> ssp. <i>grimesiana</i> <i>Cyanea humboldtiana</i> <i>Cyanea koolauensis</i> <i>Cyanea lanceolata</i> <i>Cyanea purpurellifolia</i> <i>Cyanea st.-johnnii</i> <i>Cyanea truncata</i> <i>Cyrtandra dentata</i> <i>Cyrtandra gracilis</i> <i>Cyrtandra kaulantha</i> <i>Cyrtandra polyantha</i> <i>Cyrtandra sessilis</i> <i>Cyrtandra subumbellata</i> <i>Cyrtandra viridiflora</i> <i>Cyrtandra waiolani</i> <i>Gardenia mannii</i> <i>Hesperomannia arborescens</i> <i>Huperzia nutans</i> <i>Isodendrion longifolium</i> <i>Labordia cyrtandrae</i> <i>Lobelia gaudichaudii</i> ssp. <i>koolauensis</i> <i>Lobelia oahuensis</i> <i>Melicope hiaakae</i> <i>Melicope lydgatei</i> <i>Myrsine judii</i> <i>Phyllostegia hirsuta</i> <i>Phyllostegia parviflora</i> <i>Plantago princeps</i> <i>Platanthera holochila</i> <i>Platidesma cornuta</i> var. <i>cornuta</i> <i>Psychotria hexandra</i> ssp. <i>oahuensis</i> <i>Pteralyxia macrocarpa</i> <i>Pteris lidgatei</i> <i>Sanicula purpurea</i> <i>Tetraplasandra gymnocarpa</i>

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(35) TABLE OF PROTECTED SPECIES WITHIN EACH CRITICAL HABITAT UNIT FOR OAHU—Continued

Unit name	Species occupied	Species unoccupied
Oahu—Lowland Wet—Unit 16		<i>Trematolobelia singularis</i> <i>Viola oahuensis</i> <i>Zanthoxylum oahuense</i>  <i>Adenophorus periens</i> <i>Chamaesyce rockii</i> <i>Cyanea acuminata</i> <i>Cyanea calycina</i> <i>Cyanea crispa</i> <i>Cyanea grimesiana</i> ssp. <i>grimesiana</i> <i>Cyanea humboldtiana</i> <i>Cyanea koolauensis</i> <i>Cyanea lanceolata</i> <i>Cyanea st.-johnii</i>  <i>Cyrtandra gracilis</i> <i>Cyrtandra polyantha</i> <i>Cyrtandra sessilis</i>  <i>Gardenia mannii</i> <i>Hesperomannia arborescens</i>  <i>Platydesma cornuta</i> var. <i>cornuta</i>  <i>Sanicula purpurea</i> <i>Tetraplasandra gymnocarpa</i>
Oahu—Montane Wet—Unit 1		<i>Hyperzia nutans</i> <i>Isodendrion longifolium</i> <i>Labordia cyrtandrae</i> <i>Lobelia gaudichaudii</i> ssp. <i>koolauensis</i> <i>Lobelia oahuensis</i> <i>Melicope hawaiiensis</i> <i>Melicope lydgatei</i> <i>Myrsine judii</i> <i>Phyllostegia hirsuta</i> <i>Phyllostegia parviflora</i> <i>Plantago princeps</i> <i>Platanthera holochila</i> <i>Platydesma cornuta</i> var. <i>cornuta</i> <i>Psychotria hexandra</i> ssp. <i>oahuensis</i> <i>Pteralyxia macrocarpa</i> <i>Pteris ligulata</i> <i>Sanicula purpurea</i> <i>Tetraplasandra gymnocarpa</i> <i>Trematolobelia singularis</i> <i>Viola oahuensis</i> <i>Zanthoxylum oahuense</i>  <i>Alectryon macrococcus</i> var. <i>Cyanea acuminata</i> <i>Cyanea calycina</i> <i>Labordia cyrtandrae</i> <i>Lobelia oahuensis</i> <i>Melicope christophersenii</i> <i>Phyllostegia hirsuta</i> <i>Schiedea trinervis</i>
Oahu—Dry Cliff—Unit 1		<i>Abutilon sandwicense</i> <i>Achyranthes splendens</i> var. <i>rotundata</i> <i>Alectryon macrococcus</i> <i>Bonamia menziesii</i> <i>Cenchrus agrimonoides</i> <i>Chamaesyce herbstii</i> <i>Cyanea grimesiana</i> ssp. <i>Obatae</i> <i>Cyrtandra dentata</i>  <i>Dielia falcata</i> <i>Dielia unisora</i> <i>Dubautia herbistobatae</i> <i>Eragrostis fosbergii</i> <i>Flueggea neowawraea</i>

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(35) TABLE OF PROTECTED SPECIES WITHIN EACH CRITICAL HABITAT UNIT FOR OAHU—Continued

Unit name	Species occupied	Species unoccupied
Oahu—Dry Cliff—Unit 2		<i>Gouania meyenii</i> <i>Gouania vitifolia</i> <i>Isodendrion laurifolium</i> <i>Isodendrion pyrifolium</i> <i>Kadua degeneri</i> <i>Kadua parvula</i> <i>Korthalsella degeneri</i> <i>Lepidium arbuscula</i> <i>Lipochaeta lobata</i> var. <i>leptophylla</i> <i>Lobelia niihauensis</i> <i>Melanthera tenuifolia</i> <i>Melicope makahae</i> <i>Melicope saint-johnii</i> <i>Neraudia angulata</i> <i>Nototrichium humile</i> <i>Peucedanum sandwicense</i> <i>Phyllostegia kaalaensis</i> <i>Plantago princeps</i> <i>Platidesma cornuta</i> var. <i>decurrans</i> <i>Pleomele forbesii</i> <i>Pteralyxia macrocarpa</i> <i>Sanicula mariversa</i> <i>Schiedea hookeri</i> <i>Schiedea obovata</i> <i>Schiedea trinervis</i> <i>Silene lanceolata</i> <i>Silene perlmanni</i> <i>Spermolepis hawaiiensis</i> <i>Tetramolopium filiforme</i> <i>Tetramolopium lepidotum</i> ssp. <i>lepidotum</i> <i>Viola chamissoniana</i> ssp. <i>chamissoniana</i>
	<i>Abutilon sandwicense</i>	<i>Abutilon sandwicense</i>
	<i>Alectryon macrococcus</i>	<i>Achyranthes splendens</i> var. <i>rotundata</i> <i>Alectryon macrococcus</i> <i>Bonamia menziesii</i> <i>Cenchrus agrimonoides</i> <i>Chamaesyce herbstii</i> <i>Chamaesyce kuwaleana</i> <i>Cyanea grimesiana</i> ssp. <i>obatae</i> <i>Cyrnandra dentata</i> <i>Diellia falcata</i> <i>Diellia unisora</i> <i>Dubautia herbstobatae</i>
	<i>Gouania vitifolia</i>	<i>Eragrostis fosbergii</i> <i>Flueggea neowawraea</i> <i>Gouania meyenii</i> <i>Gouania vitifolia</i> <i>Isodendrion laurifolium</i> <i>Isodendrion pyrifolium</i> <i>Kadua degeneri</i> <i>Kadua parvula</i> <i>Korthalsella degeneri</i> <i>Lepidium arbuscula</i> <i>Lipochaeta lobata</i> var. <i>leptophylla</i> <i>Lobelia niihauensis</i> <i>Melanthera tenuifolia</i> <i>Melicope makahae</i> <i>Melicope saint-johnii</i> <i>Neraudia angulata</i> <i>Nototrichium humile</i> <i>Peucedanum sandwicense</i> <i>Phyllostegia kaalaensis</i> <i>Plantago princeps</i> <i>Platidesma cornuta</i> var. <i>decurrans</i>
	<i>Platidesma cornuta</i> var. <i>decurrans</i>	<i>Platidesma cornuta</i> var. <i>decurrans</i>
	<i>Pleomele forbesii</i>	<i>Pleomele forbesii</i>
	<i>Sanicula mariversa</i>	<i>Pteralyxia macrocarpa</i> <i>Sanicula mariversa</i> <i>Schiedea hookeri</i> <i>Schiedea obovata</i> <i>Schiedea trinervis</i> <i>Silene lanceolata</i>
	<i>Schiedea hookeri</i>	

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(35) TABLE OF PROTECTED SPECIES WITHIN EACH CRITICAL HABITAT UNIT FOR OAHU—Continued

Unit name	Species occupied	Species unoccupied
Oahu—Dry Cliff—Unit 3	<p><i>Tetramolopium filiforme</i> .....</p> <p><i>Viola chamissoniana</i> ssp. <i>Chamissoniana</i>.</p> <p><i>Abutilon sandwicense</i> .....</p> <p><i>Alectryon macrococcus</i> .....</p> <p><i>Bonamia menziesii</i> .....</p> <p><i>Diellia falcata</i> .....</p> <p><i>Dubautia herbstobatae</i> .....</p> <p><i>Eragrostis fosbergii</i> .....</p> <p><i>Flueggea neowawraea</i> .....</p> <p><i>Gouania meyenii</i> .....</p> <p><i>Isodendron laurifolium</i> .....</p> <p><i>Korthalsella degeneri</i> .....</p> <p><i>Lepidium arbuscula</i> .....</p> <p><i>Lipochaeta lobata</i> var. <i>leptophylla</i> .....</p> <p><i>Lobelia niihauensis</i> .....</p> <p><i>Melanthera tenuifolia</i> .....</p> <p><i>Melicope makahae</i> .....</p> <p><i>Neraudia angulata</i> .....</p> <p><i>Nototrichium humile</i> .....</p> <p><i>Peucedanum sandwicense</i> .....</p> <p><i>Phyllostegia kaalaensis</i> .....</p> <p><i>Pleomele forbesii</i> .....</p> <p><i>Pteralyxia macrocarpa</i> .....</p> <p><i>Schiedea hookeri</i> .....</p> <p><i>Silene lanceolata</i> .....</p> <p><i>Tetramolopium filiforme</i> .....</p> <p><i>Viola chamissoniana</i> ssp. <i>Chamissoniana</i>.</p>	<p><i>Silene perlmanii</i></p> <p><i>Spermolepis hawaiiensis</i></p> <p><i>Tetramolopium filiforme</i></p> <p><i>Tetramolopium lepidotum</i> ssp. <i>lepidotum</i></p> <p><i>Viola chamissoniana</i> ssp. <i>chamissoniana</i></p> <p><i>Abutilon sandwicense</i></p> <p><i>Achyranthes splendens</i> var. <i>rotundata</i></p> <p><i>Alectryon macrococcus</i></p> <p><i>Bonamia menziesii</i></p> <p><i>Cenchrus agrimonoides</i></p> <p><i>Chamaesyce herbstii</i></p> <p><i>Chamaesyce kuwaleana</i></p> <p><i>Cyanea grimesiana</i> ssp. <i>obatae</i></p> <p><i>Cyrtandra dentata</i></p> <p><i>Diellia falcata</i></p> <p><i>Diellia unisora</i></p> <p><i>Dubautia herbstobatae</i></p> <p><i>Eragrostis fosbergii</i></p> <p><i>Flueggea neowawraea</i></p> <p><i>Gouania meyenii</i></p> <p><i>Gouania vitifolia</i></p> <p><i>Isodendron laurifolium</i></p> <p><i>Isodendron pyrifolium</i></p> <p><i>Kadua degeneri</i></p> <p><i>Kadua parvula</i></p> <p><i>Korthalsella degeneri</i></p> <p><i>Lepidium arbuscula</i></p> <p><i>Lipochaeta lobata</i> var. <i>leptophylla</i></p> <p><i>Lobelia niihauensis</i></p> <p><i>Melanthera tenuifolia</i></p> <p><i>Melicope makahae</i></p> <p><i>Melicope saint-johnii</i></p> <p><i>Neraudia angulata</i></p> <p><i>Nototrichium humile</i></p> <p><i>Peucedanum sandwicense</i></p> <p><i>Phyllostegia kaalaensis</i></p> <p><i>Plantago princeps</i></p> <p><i>Platidesma cornuta</i> var. <i>decurrens</i></p> <p><i>Pleomele forbesii</i></p> <p><i>Pteralyxia macrocarpa</i></p> <p><i>Sanicula mariversa</i></p> <p><i>Schiedea hookeri</i></p> <p><i>Schiedea obovata</i></p> <p><i>Schiedea trinervis</i></p> <p><i>Silene lanceolata</i></p> <p><i>Silene perlmanii</i></p> <p><i>Spermolepis hawaiiensis</i></p> <p><i>Tetramolopium filiforme</i></p> <p><i>Tetramolopium lepidotum</i> ssp. <i>lepidotum</i></p> <p><i>Viola chamissoniana</i> ssp. <i>chamissoniana</i></p> <p><i>Abutilon sandwicense</i></p> <p><i>Achyranthes splendens</i> var. <i>rotundata</i></p> <p><i>Alectryon macrococcus</i></p> <p><i>Bonamia menziesii</i></p> <p><i>Cenchrus agrimonoides</i></p> <p><i>Chamaesyce herbstii</i></p> <p><i>Chamaesyce kuwaleana</i></p> <p><i>Cyanea grimesiana</i> ssp. <i>obatae</i></p> <p><i>Cyrtandra dentata</i></p> <p><i>Diellia falcata</i></p> <p><i>Diellia unisora</i></p> <p><i>Dubautia herbstobatae</i></p> <p><i>Eragrostis fosbergii</i></p> <p><i>Flueggea neowawraea</i></p> <p><i>Gouania meyenii</i></p> <p><i>Gouania vitifolia</i></p> <p><i>Isodendron laurifolium</i></p> <p><i>Isodendron pyrifolium</i></p>
Oahu—Dry Cliff—Unit 4		

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(35) TABLE OF PROTECTED SPECIES WITHIN EACH CRITICAL HABITAT UNIT FOR OAHU—Continued

Unit name	Species occupied	Species unoccupied
Oahu—Dry Cliff—Unit 6		<i>Kadua degeneri</i> <i>Kadua parvula</i> <i>Korthalsella degeneri</i> <i>Lepidium arbuscula</i> <i>Lipochaeta lobata</i> var. <i>leptophylla</i> <i>Lobelia niihauensis</i> <i>Melanthera tenuifolia</i> <i>Melicope makahae</i> <i>Melicope saint-johnii</i> <i>Neraudia angulata</i> <i>Nototrichium humile</i> <i>Pucedanum sandwicense</i> <i>Phyllostegia kaalaensis</i> <i>Plantago princeps</i> <i>Platidesma cornuta</i> var. <i>decurrens</i> <i>Pleomele forbesii</i> <i>Pteralyxia macrocarpa</i> <i>Sanicula mariversa</i> <i>Schiedea hookeri</i> <i>Schiedea obovata</i> <i>Schiedea trinervis</i> <i>Silene lanceolata</i> <i>Silene perlmansi</i> <i>Spermolepis hawaiiensis</i> <i>Tetramolopium filiforme</i> <i>Tetramolopium lepidotum</i> ssp. <i>lepidotum</i> <i>Viola charnissiana</i> ssp. <i>chamissoniana</i>
		<i>Abutilon sandwicense</i> <i>Achyranthes splendens</i> var. <i>rotundata</i> <i>Alectryon macrococcus</i> <i>Bonamia menziesii</i> <i>Cenchrus agrimonoides</i> <i>Chamaesyce herbstii</i> <i>Chamaesyce kuwaleana</i> <i>Cyanea grimesiana</i> ssp. <i>obatae</i> <i>Cyrindra dentata</i> <i>Diellia falcata</i> <i>Diellia unisora</i> <i>Dubautia herbstobatae</i> <i>Eragrostis fosbergii</i> <i>Flueggea neowawraea</i> <i>Gouania meyenii</i> <i>Gouania vitifolia</i> <i>Isodendrion laurifolium</i> <i>Isodendrion pyrifolium</i> <i>Kadua degeneri</i> <i>Kadua parvula</i> <i>Korthalsella degeneri</i> <i>Lepidium arbuscula</i> <i>Lipochaeta lobata</i> var. <i>leptophylla</i> <i>Lobelia niihauensis</i> <i>Melanthera tenuifolia</i> <i>Melicope makahae</i> <i>Melicope saint-johnii</i> <i>Neraudia angulata</i> <i>Nototrichium humile</i> <i>Pucedanum sandwicense</i> <i>Phyllostegia kaalaensis</i> <i>Plantago princeps</i> <i>Platidesma cornuta</i> var. <i>decurrens</i> <i>Pleomele forbesii</i> <i>Pteralyxia macrocarpa</i> <i>Sanicula mariversa</i> <i>Schiedea hookeri</i> <i>Schiedea obovata</i> <i>Schiedea trinervis</i> <i>Silene lanceolata</i> <i>Silene perlmansi</i> <i>Spermolepis hawaiiensis</i> <i>Tetramolopium filiforme</i> <i>Tetramolopium lepidotum</i> ssp. <i>lepidotum</i>
	<i>Tetramolopium</i> <i>Lepidotum.</i>	<i>lepidotum</i> <i>ssp.</i>

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(35) TABLE OF PROTECTED SPECIES WITHIN EACH CRITICAL HABITAT UNIT FOR OAHU—Continued

Unit name	Species occupied	Species unoccupied
Oahu—Dry Cliff—Unit 7a		<i>Viola Chamissoniana</i> ssp. <i>Chamissoniana</i> <i>Abutilon sandwicense</i> <i>Achyranthes splendens</i> var. <i>rotundata</i> <i>Alectryon macrococcus</i> <i>Bonamia menziesii</i> <i>Cenchrus agrimonoides</i> <i>Chamaesyce herbstii</i> <i>Chamaesyce kuwaleana</i> <i>Cyanea grimesiana</i> ssp. <i>obatae</i> <i>Cyrtandra dentata</i> <i>Diellia falcata</i> <i>Diellia unisora</i> <i>Dubautia herbstobatae</i> <i>Eragrostis fosbergii</i> <i>Flueggea neowawraea</i> <i>Gouania meyenii</i> <i>Gouania vitifolia</i> <i>Isodendrion laurifolium</i> <i>Isodendrion pyrifolium</i> <i>Kadua degeneri</i> <i>Kadua parvula</i> <i>Korthalsella degeneri</i> <i>Lepidium arbuscula</i> <i>Lipochaeta lobata</i> var. <i>leptophylla</i> <i>Lobelia niihauensis</i> <i>Melanthera tenuifolia</i> <i>Melicope makahae</i> <i>Melicope saint-johnii</i> <i>Neraudia angulata</i> <i>Nototrichium humile</i> <i>Peucedanum sandwicense</i> <i>Phyllostegia kaalaensis</i> <i>Plantago princeps</i> <i>Platydæma cornuta</i> var. <i>decurrens</i> <i>Pleomele forbesii</i> <i>Pteralyxia macrocarpa</i> <i>Sarcicula mariversa</i> <i>Schiedea hookeri</i> <i>Schiedea obovata</i> <i>Schiedea trinervis</i> <i>Silene lanceolata</i> <i>Silene perlmanii</i> <i>Spermolepis hawaiiensis</i> <i>Tetramolopium filiforme</i> <i>Tetramolopium lepidotum</i> ssp. <i>lepidotum</i> <i>Viola Chamissoniana</i> ssp. <i>Chamissoniana</i>
Oahu—Dry Cliff—Unit 7b	<i>Viola Chamissoniana</i> <i>Chamissoniana</i>	ssp. <i>Abutilon sandwicense</i> <i>Achyranthes splendens</i> var. <i>rotundata</i> <i>Alectryon macrococcus</i> <i>Bonamia menziesii</i> <i>Cenchrus agrimonoides</i> <i>Chamaesyce herbstii</i> <i>Chamaesyce kuwaleana</i> <i>Cyanea grimesiana</i> ssp. <i>obatae</i> <i>Cyrtandra dentata</i> <i>Diellia falcata</i> <i>Diellia unisora</i> <i>Dubautia herbstobatae</i> <i>Eragrostis fosbergii</i> <i>Flueggea neowawraea</i> <i>Gouania meyenii</i> <i>Gouania vitifolia</i> <i>Isodendrion laurifolium</i> <i>Isodendrion pyrifolium</i> <i>Kadua degeneri</i> <i>Kadua parvula</i> <i>Korthalsella degeneri</i> <i>Lepidium arbuscula</i> <i>Lipochaeta lobata</i> var. <i>leptophylla</i>

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(35) TABLE OF PROTECTED SPECIES WITHIN EACH CRITICAL HABITAT UNIT FOR OAHU—Continued

Unit name	Species occupied	Species unoccupied
Oahu—Dry Cliff—Unit 8		<i>Lobelia niihauensis</i> <i>Melanthera tenuifolia</i> <i>Melicope makahae</i> <i>Melicope saint-johnii</i> <i>Neraudia angulata</i> <i>Nototrichium humile</i> <i>Peucedanum sandwicense</i> <i>Phyllostegia kaalaensis</i> <i>Plantago princeps</i> <i>Platidesma cornuta</i> var. <i>decurrens</i> <i>Pleomele forbesii</i> <i>Pteralyxia macrocarpa</i> <i>Sanicula mariversa</i> <i>Schiedea hookeri</i> <i>Schiedea obovata</i> <i>Schiedea trinervis</i> <i>Silene lanceolata</i> <i>Silene perlmanii</i> <i>Spermolepis hawaiiensis</i> <i>Tetramolopium filiforme</i> <i>Tetramolopium lepidotum</i> ssp. <i>lepidotum</i> <i>Viola chamissoniana</i> ssp. <i>chamissoniana</i>
Oahu—Wet Cliff—Unit 1	<i>Abutilon sandwicense</i> .....	<i>Abutilon sandwicense</i> <i>Achyranthes splendens</i> var. <i>rotundata</i> <i>Alectryon macrococcus</i> <i>Bonamia menziesii</i> .....
	<i>Bonamia menziesii</i> .....	<i>Bonamia menziesii</i> <i>Cenchrus agrimonoides</i> <i>Chamaesyce herbstii</i> <i>Chamaesyce kuwaleana</i> <i>Cyanea grimesiana</i> ssp. <i>obatae</i> <i>Cyrtandra dentata</i> <i>Diellia falcata</i> <i>Diellia unisora</i> <i>Dubaavia herbstobatae</i> <i>Eragrostis fosbergii</i> <i>Flueggea neowawraea</i> .....
	<i>Flueggea neowawraea</i> .....	<i>Flueggea neowawraea</i> <i>Gouania meyenii</i> <i>Gouania vitifolia</i> <i>Isodendrion laurifolium</i> <i>Isodendrion pyrifolium</i> <i>Kadua degeneri</i> <i>Kadua parvula</i> <i>Korthalsella degeneri</i> <i>Lepidium arbuscula</i> <i>Lipochaeta lobata</i> var. <i>leptophylla</i> <i>Lobelia niihauensis</i> .....
	<i>Lobelia niihauensis</i> .....	<i>Lobelia niihauensis</i> <i>Melanthera tenuifolia</i> <i>Melicope makahae</i> <i>Melicope saint-johnii</i> <i>Neraudia angulata</i> <i>Nototrichium humile</i> <i>Peucedanum sandwicense</i> <i>Phyllostegia kaalaensis</i> <i>Plantago princeps</i> <i>Platidesma cornuta</i> var. <i>decurrens</i> <i>Pleomele forbesii</i> <i>Pteralyxia macrocarpa</i> <i>Sanicula mariversa</i> <i>Schiedea hookeri</i> <i>Schiedea obovata</i> <i>Schiedea trinervis</i> <i>Silene lanceolata</i> <i>Silene perlmanii</i> <i>Spermolepis hawaiiensis</i> <i>Tetramolopium filiforme</i> <i>Tetramolopium lepidotum</i> ssp. <i>lepidotum</i> <i>Viola chamissoniana</i> ssp. <i>chamissoniana</i>
	<i>Cyanea calycina</i> .....	<i>Cyanea acuminata</i> <i>Cyanea calycina</i> <i>Labordia cyrtandrae</i>

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(35) TABLE OF PROTECTED SPECIES WITHIN EACH CRITICAL HABITAT UNIT FOR OAHU—Continued

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(35) TABLE OF PROTECTED SPECIES WITHIN EACH CRITICAL HABITAT UNIT FOR OAHU—Continued

Unit name	Species occupied	Species unoccupied
Oahu—Wet Cliff—Unit 7		<i>Plantago princeps</i> <i>Psychotria hexandra</i> ssp. <i>oahuensis</i> <i>Pteralyxia macrocarpa</i> <i>Sanicula purpurea</i> <i>Schiedea kaalae</i> <i>Tetraplasandra gymnocarpa</i> <i>Trematolobelia singularis</i> <i>Viola oahuensis</i>  <i>Adenophorus periens</i> <i>Chamaesyce deppeana</i> <i>Chamaesyce rockii</i> <i>Cyanea acuminata</i> <i>Cyanea calycina</i> <i>Cyanea crispa</i> <i>Cyanea humboldtiana</i> <i>Cyanea purpurellifolia</i> <i>Cyanea st.-johnii</i> <i>Cyanea truncata</i> <i>Cyrtandra kaulantha</i> <i>Cyrtandra sessilis</i> <i>Cyrtandra subumbellata</i> <i>Cyrtandra viridiflora</i> <i>Huperzia nutans</i> <i>Labordia cyrtandrae</i> <i>Lobelia oahuensis</i> <i>Lysimachia filifolia</i> <i>Phyllostegia hirsuta</i> <i>Phyllostegia parviflora</i> <i>Plantago princeps</i> <i>Psychotria hexandra</i> ssp. <i>oahuensis</i> <i>Pteralyxia macrocarpa</i> <i>Sanicula purpurea</i> <i>Schiedea kaalae</i> <i>Tetraplasandra gymnocarpa</i> <i>Trematolobelia singularis</i> <i>Viola oahuensis</i>
Oahu—Wet Cliff—Unit 8		<i>Adenophorus periens</i> <i>Chamaesyce deppeana</i> <i>Chamaesyce rockii</i> <i>Cyanea acuminata</i> <i>Cyanea calycina</i> <i>Cyanea crispa</i> <i>Cyanea humboldtiana</i> <i>Cyanea purpurellifolia</i> <i>Cyanea st.-johnii</i> <i>Cyanea truncata</i> <i>Cyrtandra kaulantha</i> <i>Cyrtandra sessilis</i> <i>Cyrtandra subumbellata</i> <i>Cyrtandra viridiflora</i> <i>Huperzia nutans</i> <i>Labordia cyrtandrae</i> <i>Lobelia oahuensis</i> <i>Lysimachia filifolia</i> <i>Phyllostegia hirsuta</i> <i>Phyllostegia parviflora</i> <i>Plantago princeps</i> <i>Psychotria hexandra</i> ssp. <i>oahuensis</i> <i>Pteralyxia macrocarpa</i> <i>Sanicula purpurea</i> <i>Schiedea kaalae</i> <i>Tetraplasandra gymnocarpa</i> <i>Trematolobelia singularis</i> <i>Viola oahuensis</i>

(j) Plants on Oahu; Constituent elements.

(1) Flowering plants.

**U.S. Fish and Wildlife Serv., Interior****§ 17.99****FAMILY AMARANTHACEAE*****Achyranthes splendens* var. *rotundata*  
(round-leaved chaff flower)**

Oahu—Coastal—Unit 1, Oahu—Coastal—Unit 13, Oahu—Coastal—Unit 14, Oahu—Coastal—Unit 15, Oahu—Lowland Dry—Unit 1, Oahu—Lowland Dry—Unit 2, Oahu—Lowland Dry—Unit 8, Oahu—Lowland Dry—Unit 9, Oahu—Lowland Dry—Unit 10, Oahu—Lowland Dry—Unit 11, Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Achyranthes splendens* var. *rotundata* on Oahu.

(i) In units Oahu—Coastal—Unit 1, Oahu—Coastal—Unit 13, Oahu—Coastal—Unit 14, and Oahu—Coastal—Unit 15, the physical and biological features of critical habitat are:

(A) Elevation: Less than 980 ft (300 m).

(B) Annual precipitation: Less than 20 in (50 cm).

(C) Substrate: Well-drained, calcareous, talus slopes; weathered clay soils; ephemeral pools; mudflats.

(D) Canopy: *Hibiscus*, *Myoporum*, *Santalum*, *Scaevola*.

(E) Subcanopy: *Gossypium*, *Sida*, *Vitex*.

(F) Understory: *Eragrostis*, *Jacquemontia*, *Lyceum*, *Nama*, *Sesuvium*, *Sporobolus*, *Vigna*.

(ii) In Oahu—Lowland Dry—Unit 1, Oahu—Lowland Dry—Unit 2, Oahu—Lowland Dry—Unit 8, Oahu—Lowland Dry—Unit 9, Oahu—Lowland Dry—Unit 10, and Oahu—Lowland Dry—Unit 11, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Less than 50 in (130 cm).

(C) Substrate: Weathered silty loams to stony clay, rocky ledges, little-weathered lava.

(D) Canopy: *Diospyros*, *Myoporum*, *Pleomele*, *Santalum*, *Sapindus*.

(E) Subcanopy: *Chamaesyce*, *Dodonaea*, *Leptecophylla*, *Osteomeles*, *Psydrax*, *Scaevola*, *Wikstroemia*.

(F) Understory: *Alyxia*, *Artemisia*, *Bidens*, *Chenopodium*, *Nephrolepis*, *Peperomia*, *Plumbago*, *Sicyos*, *Sida*, *Waltheria*.

(iii) In units Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Less than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, rocky talus.

(D) Canopy: None.

(E) Subcanopy: *Antidesma*, *Chamaesyce*, *Diospyros*, *Dodonaea*.

(F) Understory: *Bidens*, *Eragrostis*, *Melanthera*, *Schiedea*.

***Nototrichium humile* (KULUI)**

Oahu—Lowland Dry—Unit 1, Oahu—Lowland Dry—Unit 2, Oahu—Lowland Dry—Unit 8, Oahu—Lowland Dry—Unit 9, Oahu—Lowland Dry—Unit 10, Oahu—Lowland Dry—Unit 11, Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Nototrichium humile* on Oahu.

(i) In units Oahu—Lowland Dry—Unit 1, Oahu—Lowland Dry—Unit 2, Oahu—Lowland Dry—Unit 8, Oahu—Lowland Dry—Unit 9, Oahu—Lowland Dry—Unit 10, and Oahu—Lowland Dry—Unit 11, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Less than 50 in (130 cm).

(C) Substrate: Weathered silty loams to stony clay, rocky ledges, little-weathered lava.

(D) Canopy: *Diospyros*, *Myoporum*, *Pleomele*, *Santalum*, *Sapindus*.

(E) Subcanopy: *Chamaesyce*, *Dodonaea*, *Leptecophylla*, *Osteomeles*, *Psydrax*, *Scaevola*, *Wikstroemia*.

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(F) Understory: *Alyxia*, *Artemisia*, *Bidens*, *Chenopodium*, *Nephrolepis*, *Peperomia*, *Plumbago*, *Sicyos*, *Sida*, *Waltheria*.

(ii) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, and Oahu—Lowland Mesic—Unit 3, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(iii) In units Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Less than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, rocky talus.

(D) Canopy: None.

(E) Subcanopy: *Antidesma*, *Chamaesyce*, *Diospyros*, *Dodonaea*.

(F) Understory: *Bidens*, *Eragrostis*, *Melanthera*, *Schiedea*.

## FAMILY APIACEAE

### *Peucedanum sandwicense* (MAKOU)

Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Peucedanum sandwicense* on Oahu. Within these units, the physical and biological features of critical habitat are:

(i) Elevation: Unrestricted.

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(ii) Annual precipitation: Less than 75 in (190 cm).

(iii) Substrate: Greater than 65 degree slope, rocky talus.

(iv) Canopy: None.

(v) Subcanopy: *Antidesma*, *Chamaesyce*, *Diospyros*, *Dodonaea*.

(vi) Understory: *Bidens*, *Eragrostis*, *Melanthera*, *Schiedea*.

### *Sanicula mariversa* (NCN)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Sanicula mariversa* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, and Oahu—Lowland Mesic—Unit 3, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Less than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, rocky talus.

(D) Canopy: None.

(E) Subcanopy: *Antidesma*, *Chamaesyce*, *Diospyros*, *Dodonaea*.

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(F) Understory: *Bidens*, *Eragrostis*, *Melanthera*, *Schiedea*.

*Sanicula purpurea* (NCN)

Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, Oahu—Lowland Wet—Unit 16, Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Sanicula purpurea* on Oahu.

(i) In units Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(F) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

(ii) In units Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, shallow soils, weathered lava, bogs.

(D) Canopy: None.

(E) Subcanopy: *Broussaisia*, *Cheirodendron*, *Leptecophylla*, *Metrosideros*.

(F) Understory: Ferns, Bryophytes, *Coprosma*, *Dubautia*, *Kadua*, *Peperomia*.

*Spermolepis hawaiiensis* (NCN)

Oahu—Lowland Dry—Unit 1, Oahu—Lowland Dry—Unit 2, Oahu—Lowland Dry—Unit 3, Oahu—Lowland Dry—Unit 4, Oahu—Lowland Dry—Unit 5, Oahu—Lowland Dry—Unit 6, Oahu—Lowland Dry—Unit 7, Oahu—Lowland Dry—Unit 8, Oahu—Lowland Dry—Unit 9, Oahu—Lowland Dry—Unit 10, Oahu—Lowland Dry—Unit 11, Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 5, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Spermolepis hawaiiensis* on Oahu.

(i) In units Oahu—Lowland Dry—Unit 1, Oahu—Lowland Dry—Unit 2, Oahu—Lowland Dry—Unit 3, Oahu—Lowland Dry—Unit 4, Oahu—Lowland Dry—Unit 5, Oahu—Lowland Dry—Unit 6, Oahu—Lowland Dry—Unit 7, Oahu—Lowland Dry—Unit 8, Oahu—Lowland Dry—Unit 9, Oahu—Lowland Dry—Unit 10, and Oahu—Lowland Dry—Unit 11, the physical or biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Less than 50 in (130 cm).

(C) Substrate: Weathered silty loams to stony clay, rocky ledges, little-weathered lava.

(D) Canopy: *Diospyros*, *Myoporum*, *Pleomele*, *Santalum*, *Sapindus*.

(E) Subcanopy: *Chamaesyce*, *Dodonaea*, *Leptecophylla*, *Osteomeles*, *Psydrax*, *Scaevola*, *Wikstroemia*.

(F) Understory: *Alyxia*, *Artemisia*, *Bidens*, *Chenopodium*, *Nephrolepis*, *Peperomia*, *Plumbago*, *Sicyos*, *Sida*, *Waltheria*.

(ii) In units Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 5, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Less than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, rocky talus.

(D) Canopy: None.

(E) Subcanopy: *Antidesma*, *Chamaesyce*, *Diospyros*, *Dodonaea*.

(F) Understory: *Bidens*, *Eragrostis*, *Melanthera*, *Schiedea*.

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### FAMILY APOCYNACEAE

#### *Pteralyxia macrocarpa* (KAULU)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, Oahu—Lowland Mesic—Unit 7, Oahu—Lowland Wet—Unit 1, Oahu—Lowland Wet—Unit 2, Oahu—Lowland Wet—Unit 3, Oahu—Lowland Wet—Unit 4, Oahu—Lowland Wet—Unit 5, Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, Oahu—Lowland Wet—Unit 16, Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, Oahu—Dry Cliff—Unit 8, Oahu—Wet Cliff—Unit 1, Oahu—Wet Cliff—Unit 2, Oahu—Wet Cliff—Unit 3, Oahu—Wet Cliff—Unit 4, Oahu—Wet Cliff—Unit 5, Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Pteralyxia macrocarpa* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—6, and Oahu—Lowland Mesic—Unit 7, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

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(ii) In units Oahu—Lowland Wet—Unit 1, Oahu—Lowland Wet—Unit 2, Oahu—Lowland Wet—Unit 3, Oahu—Lowland Wet—Unit 4, Oahu—Lowland Wet—Unit 5, Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(F) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

(iii) In units Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Less than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, rocky talus.

(D) Canopy: None.

(E) Subcanopy: *Antidesma*, *Chamaesyce*, *Diospyros*, *Dodonaea*.

(F) Understory: *Bidens*, *Eragrostis*, *Melanthera*, *Schiedea*.

(iv) In units Oahu—Wet Cliff—Unit 1, Oahu—Wet Cliff—Unit 2, Oahu—Wet Cliff—Unit 3, Oahu—Wet Cliff—Unit 4, Oahu—Wet Cliff—Unit 5, Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, shallow soils, weathered lava.

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- (D) Canopy: None.  
(E) Subcanopy: *Broussaisia*,  
*Cheirodendron*, *Leptecophylla*,  
*Metrosideros*.  
(F) Understory: Ferns, Bryophytes,  
*Coprosma*, *Dubauteia*, *Kadua*, *Peperomia*.

**FAMILY ARALEACEAE*****Tetraplasandra gymnocarpa* (OHE OHE)**

Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, Oahu—Lowland Mesic—Unit 7, Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, Oahu—Lowland Wet—Unit 16, Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Tetraplasandra gymnocarpa* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, and Oahu—Lowland Mesic—Unit 7, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).  
(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.  
(D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.  
(F) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

(iii) In units Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, the physical and biological features of critical habitat are:  
(A) Elevation: Unrestricted.  
(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, shallow soils, weathered lava.  
(D) Canopy: None.  
(E) Subcanopy: *Broussaisia*, *Cheirodendron*, *Leptecophylla*, *Metrosideros*.

(F) Understory: Ferns, Bryophytes, *Coprosma*, *Dubauteia*, *Kadua*, *Peperomia*.

***Tetraplasandra lydgatei* (NCN)**

Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, and Oahu—Lowland Mesic—Unit 7, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Tetraplasandra lydgatei* on Oahu. Within these units, the physical and biological features of critical habitat are:

(i) Elevation: Less than 3,300 ft (1,000 m).

(ii) Annual precipitation: 50 to 75 in (130 to 190 cm).

(iii) Substrate: Shallow soils, little to no herbaceous layer.

(iv) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(v) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(vi) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

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### FAMILY ASPARAGACEAE

#### *Pleomele forbesii* (HALA PEPE)

Oahu—Lowland Dry—Unit 1, Oahu—Lowland Dry—Unit 2, Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, Oahu—Lowland Mesic—Unit 7, Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Pleomele forbesii* on Oahu.

(i) In units Oahu—Lowland Dry—Unit 1 and Oahu—Lowland Dry—Unit 2, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Less than 50 in (130 cm).

(C) Substrate: Weathered silty loams to stony clay, rocky ledges, little-weathered lava.

(D) Canopy: *Diospyros*, *Myoporum*, *Pleomele*, *Santalum*, *Sapindus*.

(E) Subcanopy: *Chamaesyce*, *Dodonaea*, *Leptecophylla*, *Osteomeles*, *Sydrax*, *Scaevola*, *Wikstroemia*.

(F) Understory: *Alyxia*, *Artemisia*, *Bidens*, *Chenopodium*, *Nephrolepis*, *Peperomia*, *Plumbago*, *Sicyos*, *Sida*, *Waltheria*.

(ii) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, and Oahu—Lowland Mesic—Unit 7, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

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(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Sydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(iii) In units Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Less than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, rocky talus.

(D) Canopy: None.

(E) Subcanopy: *Antidesma*, *Chamaesyce*, *Diospyros*, *Dodonaea*.

(F) Understory: *Bidens*, *Eragrostis*, *Melanthera*, *Schiedea*.

### FAMILY ASTERACEAE

#### *Bidens amplexens* (KOOKOOLAU)

Oahu—Coastal—Unit 1, Oahu—Coastal—Unit 13, Oahu—Coastal—Unit 14, Oahu—Coastal—Unit 15, Oahu—Lowland Dry—Unit 1, Oahu—Lowland Dry—Unit 2, Oahu—Lowland Dry—Unit 8, Oahu—Lowland Dry—Unit 9, Oahu—Lowland Dry—Unit 10, and Oahu—Lowland Dry—Unit 11, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Bidens amplexens* on Oahu.

(i) In units Oahu—Coastal—Unit 1, Oahu—Coastal—Unit 13, Oahu—Coastal—Unit 14, and Oahu—Coastal—Unit 15, the physical and biological features of critical habitat are:

(A) Elevation: Less than 980 ft (300 m).

(B) Annual precipitation: Less than 20 in (50 cm).

(C) Substrate: Well-drained, calcareous, talus slopes; weathered clay soils; ephemeral pools; mudflats.

(D) Canopy: *Hibiscus*, *Myoporum*, *Santalum*, *Scaevola*.

(E) Subcanopy: *Gossypium*, *Sida*, *Vitex*.

(F) Understory: *Eragrostis*, *Jacquemontia*, *Lyceum*, *Nama*, *Sesuvium*, *Sporobolus*, *Vigna*.

(ii) In units Oahu—Lowland Dry—Unit 1, Oahu—Lowland Dry—Unit 2,

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Oahu—Lowland Dry—Unit 8, Oahu—Lowland Dry—Unit 9, Oahu—Lowland Dry—Unit 10, and Oahu—Lowland Dry—Unit 11, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Less than 50 in (130 cm).

(C) Substrate: Weathered silty loams to stony clay, rocky ledges, little-weathered lava.

(D) Canopy: *Diospyros*, *Myoporum*, *Pleomele*, *Santalum*, *Sapindus*.

(E) Subcanopy: *Chamaesyce*, *Dodonaea*, *Leptecophylla*, *Osteomeles*, *Psydrax*, *Scaevola*, *Wikstroemia*.

(F) Understory: *Alyxia*, *Artemisia*, *Bidens*, *Chenopodium*, *Nephrolepis*, *Peperomia*, *Plumbago*, *Sicyos*, *Sida*, *Waltheria*.

***Dubautia herbstobatae* (NAENAE)**

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Dubautia herbstobatae* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, and Oahu—Lowland Mesic—Unit 3, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit

7b, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Less than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, rocky talus.

(D) Canopy: None.

(E) Subcanopy: *Antidesma*, *Chamaesyce*, *Diospyros*, *Dodonaea*.

(F) Understory: *Bidens*, *Eragrostis*, *Melanthera*, *Schiedea*.

***Hesperomannia arborescens* (NCN)**

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, Oahu—Lowland Mesic—Unit 7, Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Hesperomannia arborescens* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, and Oahu—Lowland Mesic—Unit 7, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—

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Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(F) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

### *Hesperomannia arbuscula* (NCN)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Wet—Unit 1, Oahu—Lowland Wet—Unit 2, Oahu—Lowland Wet—Unit 3, Oahu—Lowland Wet—Unit 4, and Oahu—Lowland Wet—Unit 5, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Hesperomannia arbuscula* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, and Oahu—Lowland Mesic—Unit 3, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Lowland Wet—Unit 1, Oahu—Lowland Wet—Unit 2, Oahu—Lowland Wet—Unit 3, Oahu—Lowland Wet—Unit 4, and Oahu—Lowland Wet—Unit 5, the physical and biological features of critical habitat are:

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(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(F) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

### *Lipochaeta lobata* var. *leptophylla*

(NEHE)

Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Lipochaeta lobata* var. *leptophylla* on Oahu. Within these units, the physical and biological features of critical habitat are:

(i) Elevation: Unrestricted.

(ii) Annual precipitation: Less than 75 in (190 cm).

(iii) Substrate: Greater than 65 degree slope, rocky talus.

(iv) Canopy: None.

(v) Subcanopy: *Antidesma*, *Chamaesyce*, *Diospyros*, *Dodonaea*.

(vi) Understory: *Bidens*, *Eragrostis*, *Melanthera*, *Schiedea*.

### *Melanthera tenuifolia* (NEHE)

Oahu—Lowland Dry—Unit 1, Oahu—Lowland Dry—Unit 2, Oahu—Lowland Dry—Unit 8, Oahu—Lowland Dry—Unit 9, Oahu—Lowland Dry—Unit 10, Oahu—Lowland Dry—Unit 11, Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Melanthera tenuifolia* on Oahu.

(i) In units Oahu—Lowland Dry—Unit 1, Oahu—Lowland Dry—Unit 2, Oahu—Lowland Dry—Unit 8, Oahu—Lowland Dry—Unit 9, Oahu—Lowland Dry—Unit 10, Oahu—Lowland Dry—Unit 11, Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Melanthera tenuifolia* on Oahu.

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Dry—Unit 9, Oahu—Lowland Dry—Unit 10, and Oahu—Lowland Dry—Unit 11, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Less than 50 in (130 cm).

(C) Substrate: Weathered silty loams to stony clay, rocky ledges, little weathered lava.

(D) Canopy: *Diospyros*, *Myoporum*, *Pleomele*, *Santalum*, *Sapindus*.

(E) Subcanopy: *Chamaesyce*, *Dodonaea*, *Leptecophylla*, *Osteomeles*, *Psydrax*, *Scaevola*, *Wikstroemia*.

(F) Understory: *Alyxia*, *Artemisia*, *Bidens*, *Chenopodium*, *Nephrolepis*, *Peperomia*, *Plumbago*, *Sicyos*, *Sida*, *Waltheria*.

(ii) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, and Oahu—Lowland Mesic—Unit 3, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(iii) In units Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Less than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, rocky talus.

(D) Canopy: None.

(E) Subcanopy: *Antidesma*, *Chamaesyce*, *Diospyros*, *Dodonaea*.

(F) Understory: *Bidens*, *Eragrostis*, *Melanthera*, *Schiedea*.

***Tetramolopium filiforme* (NCN)**

Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Tetramolopium filiforme* on Oahu. Within these units, the physical and biological features of critical habitat are:

(i) Elevation: Unrestricted.

(ii) Annual precipitation: Less than 75 in (190 cm).

(iii) Substrate: Greater than 65 degree slope, rocky talus.

(iv) Canopy: None.

(v) Subcanopy: *Antidesma*, *Chamaesyce*, *Diospyros*, *Dodonaea*.

(vi) Understory: *Bidens*, *Eragrostis*, *Melanthera*, *Schiedea*.

***Tetramolopium lepidotum* ssp. *lepidotum* (NCN)**

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Tetramolopium lepidotum* ssp. *lepidotum* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, and Oahu—Lowland Mesic—Unit 3, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

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(ii) In units Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat are:

- (A) Elevation: Unrestricted.
- (B) Annual precipitation: Less than 75 in (190 cm).
- (C) Substrate: Greater than 65 degree slope, rocky talus.
- (D) Canopy: None.
- (E) Subcanopy: *Antidesma, Chamaesyce, Diospyros, Dodonaea.*
- (F) Understory: *Bidens, Eragrostis, Melanthera, Schiedea.*

### FAMILY BRASSICACEAE

#### *Lepidium arbuscula* (ANAUNAU)

Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Lepidium arbuscula* on Oahu. Within these units, the physical and biological features of critical habitat are:

- (i) Elevation: Unrestricted.
- (ii) Annual precipitation: Less than 75 in (190 cm).
- (iii) Substrate: Greater than 65 degree slope, rocky talus.
- (iv) Canopy: None.
- (v) Subcanopy: *Antidesma, Chamaesyce, Diospyros, Dodonaea.*
- (vi) Understory: *Bidens, Eragrostis, Melanthera, Schiedea.*

### FAMILY CAMPANULACEAE

#### *Cyanea acuminata* (HAHA)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, Oahu—Lowland Mesic—Unit 7, Oahu—Lowland Wet—Unit 1, Oahu—Lowland Wet—Unit 2, Oahu—Lowland Wet—Unit 3, Oahu—Lowland Wet—Unit 4, Oahu—Lowland Wet—Unit 5, Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland

Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, Oahu—Lowland Wet—Unit 16, Oahu—Montane Wet—Unit 1, Oahu—Wet Cliff—Unit 2, Oahu—Wet Cliff—Unit 3, Oahu—Wet Cliff—Unit 4, Oahu—Wet Cliff—Unit 5, Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Cyanea acuminata* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, and Oahu—Lowland Mesic—Unit 7, the physical and biological features of critical habitat are:

- (A) Elevation: Less than 3,300 ft (1,000 m).
- (B) Annual precipitation: 50 to 75 in (130 to 190 cm).
- (C) Substrate: Shallow soils, little to no herbaceous layer.
- (D) Canopy: *Acacia, Diospyros, Metrosideros, Myrsine, Pouteria, Santalum.*
- (E) Subcanopy: *Dodonaea, Freycinetia, Leptecophylla, Melanthera, Osteomeles, Pleomele, Psydrax.*
- (F) Understory: *Carex, Dicranopteris, Diplazium, Elaphoglossum, Peperomia.*

(ii) In units Oahu—Lowland Wet—Unit 1, Oahu—Lowland Wet—Unit 2, Oahu—Lowland Wet—Unit 3, Oahu—Lowland Wet—Unit 4, Oahu—Lowland Wet—Unit 5, Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, the physical and biological features of critical habitat are:

- (A) Elevation: Less than 3,300 ft (1,000 m).
- (B) Annual precipitation: Greater than 75 in (190 cm).

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(C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(F) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

(iii) In unit Oahu—Montane Wet—Unit 1, the physical and biological features of critical habitat are:

(A) Elevation: 3,300 to 6,600 ft (1,000 to 2,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Well-developed soils, montane bogs.

(D) Canopy: *Acacia*, *Charpentiera*, *Cheirodendron*, *Metrosideros*.

(E) Subcanopy: *Broussaisia*, *Cibotium*, *Eurya*, *Ilex*, *Myrsine*.

(F) Understory: Ferns, *Carex*, *Coprosma*, *Leptecophylla*, *Oreobolus*, *Rhynchospora*, *Vaccinium*.

(iv) In units Oahu—Wet Cliff—Unit 1, Oahu—Wet Cliff—Unit 2, Oahu—Wet Cliff—Unit 3, Oahu—Wet Cliff—Unit 4, Oahu—Wet Cliff—Unit 5, Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, shallow soils, weathered lava.

(D) Canopy: None.

(E) Subcanopy: *Broussaisia*, *Cheirodendron*, *Leptecophylla*, *Metrosideros*.

(F) Understory: Ferns, Bryophytes, *Coprosma*, *Dubautia*, *Kadua*, *Peperomia*.

***Cyanea calycina* (HAHA)**

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, Oahu—Lowland Mesic—Unit 7, Oahu—Lowland Wet—Unit 1, Oahu—Lowland Wet—Unit 2, Oahu—Lowland Wet—Unit 3, Oahu—Lowland Wet—Unit 4, Oahu—Lowland Wet—Unit 5, Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—

Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, Oahu—Lowland Wet—Unit 16, Oahu—Montane Wet—Unit 1, Oahu—Wet Cliff—Unit 1, Oahu—Wet Cliff—Unit 2, Oahu—Wet Cliff—Unit 3, Oahu—Wet Cliff—Unit 4, Oahu—Wet Cliff—Unit 5, Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Cyanea calycina* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, and Oahu—Lowland Mesic—Unit 7, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Lowland Wet—Unit 1, Oahu—Lowland Wet—Unit 2, Oahu—Lowland Wet—Unit 3, Oahu—Lowland Wet—Unit 4, Oahu—Lowland Wet—Unit 5, Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

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- (D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.
  - (E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.
  - (F) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.
- (iii) In unit Oahu—Montane Wet—Unit 1, the physical and biological features of critical habitat are:
- (A) Elevation: 3,300 to 6,600 ft (1,000 to 2,000 m).
  - (B) Annual precipitation: Greater than 75 in (190 cm).
  - (C) Substrate: Well-developed soils, montane bogs.
  - (D) Canopy: *Acacia*, *Charpentiera*, *Cheirodendron*, *Metrosideros*.
  - (E) Subcanopy: *Broussaisia*, *Cibotium*, *Eurya*, *Ilex*, *Myrsine*.
  - (F) Understory: Ferns, *Carex*, *Coprosma*, *Leptecophylla*, *Oreobolus*, *Rhynchospora*, *Vaccinium*.
- (iv) In units Oahu—Wet Cliff—Unit 1, Oahu—Wet Cliff—Unit 2, Oahu—Wet Cliff—Unit 3, Oahu—Wet Cliff—Unit 4, Oahu—Wet Cliff—Unit 5, Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, the physical and biological features of critical habitat are:
- (A) Elevation: Unrestricted.
  - (B) Annual precipitation: Greater than 75 in (190 cm).
  - (C) Substrate: Greater than 65 degree slope, shallow soils, weathered lava.
  - (D) Canopy: None.
  - (E) Subcanopy: *Broussaisia*, *Cheirodendron*, *Leptecophylla*, *Metrosideros*.
  - (F) Understory: Bryophytes, Ferns, *Coprosma*, *Dubautia*, *Kadua*, *Peperomia*.

### *Cyanea crispa* (NCN)

Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, Oahu—Lowland Mesic—Unit 7, Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, Oahu—Lowland Wet—Unit 16, Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, identified in the

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legal descriptions in paragraph (i) of this section, constitute critical habitat for *Cyanea crispa* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, and Oahu—Lowland Mesic—Unit 7, the physical and biological features of critical habitat are:

- (A) Elevation: Less than 3,300 ft (1,000 m).

- (B) Annual precipitation: 50 to 75 in (130 to 190 cm).

- (C) Substrate: Shallow soils, little to no herbaceous layer.

- (D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

- (E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

- (F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, the physical and biological features of critical habitat are:

- (A) Elevation: Less than 3,300 ft (1,000 m).

- (B) Annual precipitation: Greater than 75 in (190 cm).

- (C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

- (D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

- (E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

- (F) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

(iii) In units Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, the physical and biological features of critical habitat are:

- (A) Elevation: Unrestricted.

- (B) Annual precipitation: Greater than 75 in (190 cm).

- (C) Substrate: Greater than 65 degree slope, shallow soils, weathered lava.

- (D) Canopy: None.

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(E) Subcanopy: *Broussaisia*, *Cheirodendron*, *Leptecophylla*, *Metrosideros*.

(F) Understory: Bryophytes, Ferns, *Coprosma*, *Dubautia*, *Kadua*, *Peperomia*.

*Cyanea grimesiana* ssp. *grimesiana* (HAHA)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, Oahu—Lowland Mesic—Unit 7, Oahu—Lowland Wet—Unit 1, Oahu—Lowland Wet—Unit 2, Oahu—Lowland Wet—Unit 3, Oahu—Lowland Wet—Unit 4, Oahu—Lowland Wet—Unit 5, Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Cyanea grimesiana* ssp. *grimesiana* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, and Oahu—Lowland Mesic—Unit 7, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Lowland Wet—Unit 1, Oahu—Lowland Wet—Unit 2, Oahu—Lowland Wet—Unit 3, Oahu—Lowland Wet—Unit 4, Oahu—Lowland Wet—Unit 5, Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7,

Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(F) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

*Cyanea grimesiana* ssp. *obatae* (HAHA)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Wet—Unit 1, Oahu—Lowland Wet—Unit 2, Oahu—Lowland Wet—Unit 3, Oahu—Lowland Wet—Unit 4, Oahu—Lowland Wet—Unit 5, Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 5, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Cyanea grimesiana* ssp. *obatae* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, and Oahu—Lowland Mesic—Unit 3, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

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(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Lowland Wet—Unit 1, Oahu—Lowland Wet—Unit 2, Oahu—Lowland Wet—Unit 3, Oahu—Lowland Wet—Unit 4, and Oahu—Lowland Wet—Unit 5, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(F) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

(iii) In units Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Less than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, rocky talus.

(D) Canopy: None.

(E) Subcanopy: *Antidesma*, *Chamaesyce*, *Diospyros*, *Dodonaea*.

(F) Understory: *Bidens*, *Eragrostis*, *Melanthera*, *Schiedea*.

### *Cyanea humboldtiana* (HAHA)

Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, Oahu—Lowland Wet—Unit 16, Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Cyanea humboldtiana* on Oahu.

(i) In units Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—

Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(F) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

(ii) In units Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, shallow soils, weathered lava.

(D) Canopy: None.

(E) Subcanopy: *Broussaisia*, *Cheirodendron*, *Leptecophylla*, *Metrosideros*.

(F) Understory: Bryophytes, Ferns, *Coprosma*, *Dubaustia*, *Kadua*, *Peperomia*.

### *Cyanea koolauensis* (HAHA)

Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Cyanea koolauensis* on Oahu. Within these units, the physical and biological features of critical habitat are:

(i) Elevation: Less than 3,300 ft (1,000 m).

(ii) Annual precipitation: Greater than 75 in (190 cm).

(iii) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

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- (iv) Canopy: *Antidesma, Metrosideros, Myrsine, Pisonia, Psychotria.*
- (v) Subcanopy: *Cibotium, Claoxylon, Kadua, Melicope.*
- (vi) Understory: *Alyxia, Cyrtandra, Dicranopteris, Diplazium, Machaerina, Microlepia.*

***Cyanea lanceolata* (HAHA)**

Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, Oahu—Lowland Mesic—Unit 7, Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Cyanea lanceolata* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, and Oahu—Lowland Mesic—Unit 7, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia, Diospyros, Metrosideros, Myrsine, Pouteria, Santalum.*

(E) Subcanopy: *Dodonaea, Freycinetia, Leptecophylla, Melanthera, Osteomeles, Pleomele, Psydrax.*

(F) Understory: *Carex, Dicranopteris, Diplazium, Elaphoglossum, Peperomia.*

(ii) In units Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(D) Canopy: *Antidesma, Metrosideros, Myrsine, Pisonia, Psychotria.*

(E) Subcanopy: *Cibotium, Claoxylon, Kadua, Melicope.*

(F) Understory: *Alyxia, Cyrtandra, Dicranopteris, Diplazium, Machaerina, Microlepia.*

***Cyanea longiflora* (HAHA)**

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, and Oahu—Lowland Mesic—Unit 7, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Cyanea longiflora* on Oahu. Within these units, the physical and biological features of critical habitat are:

(i) Elevation: Less than 3,300 ft (1,000 m).

(ii) Annual precipitation: 50 to 75 in (130 to 190 cm).

(iii) Substrate: Shallow soils, little to no herbaceous layer.

(iv) Canopy: *Acacia, Diospyros, Metrosideros, Myrsine, Pouteria, Santalum.*

(v) Subcanopy: *Dodonaea, Freycinetia, Leptecophylla, Melanthera, Osteomeles, Pleomele, Psydrax.*

(vi) Understory: *Carex, Dicranopteris, Diplazium, Elaphoglossum, Peperomia.*

***Cyanea pinnatifida* (HAHA)**

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, and Oahu—Lowland Mesic—Unit 3, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Cyanea pinnatifida* on Oahu. Within these units, the physical and biological features of critical habitat are:

(i) Elevation: Less than 3,300 ft (1,000 m).

(ii) Annual precipitation: 50 to 75 in (130 to 190 cm).

(iii) Substrate: Shallow soils, little to no herbaceous layer.

(iv) Canopy: *Acacia, Diospyros, Metrosideros, Myrsine, Pouteria, Santalum.*

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(v) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(vi) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

### *Cyanea purpurellifolia* (HAHA)

Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, Oahu—Lowland Wet—Unit 16, Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Cyanea purpurellifolia* on Oahu.

(i) In units Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(F) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

(ii) In units Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, the physical or biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, shallow soils, weathered lava.

(D) Canopy: None.

(E) Subcanopy: *Broussaisia*, *Cheirodendron*, *Leptecophylla*, *Metrosideros*.

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(F) Understory: Bryophytes, Ferns, *Coprosma*, *Dubaustia*, *Kadua*, *Peperomia*.

### *Cyanea st.-johnii* (HAHA)

Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, Oahu—Lowland Wet—Unit 16, Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Cyanea st.-johnii* on Oahu.

(i) In units Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(F) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

(ii) In units Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, shallow soils, weathered lava.

(D) Canopy: None.

(E) Subcanopy: *Broussaisia*, *Cheirodendron*, *Leptecophylla*, *Metrosideros*.

(F) Understory: Bryophytes, Ferns, *Coprosma*, *Dubaustia*, *Kadua*, *Peperomia*.

**U.S. Fish and Wildlife Serv., Interior****§ 17.99*****Cyanea superba* (NCN)**

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, and Oahu—Lowland Mesic—Unit 3, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Cyanea superba* on Oahu. Within these units, the physical and biological features of critical habitat are:

- (i) Elevation: Less than 3,300 ft (1,000 m).
- (ii) Annual precipitation: 50 to 75 in (130 to 190 cm).
- (iii) Substrate: Shallow soils, little to no herbaceous layer.
- (iv) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.
- (v) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.
- (vi) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

***Cyanea truncata* (HABA)**

Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, Oahu—Lowland Mesic—Unit 7, Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, Oahu—Lowland Wet—Unit 16, Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Cyanea truncata* on Oahu.

- (i) In units Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, and Oahu—Lowland Mesic—Unit 7, the physical and biological features of critical habitat are:
  - (A) Elevation: Less than 3,300 ft (1,000 m).
  - (B) Annual precipitation: 50 to 75 in (130 to 190 cm).
  - (C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(F) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

(iii) In units Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, shallow soils, weathered lava.

(D) Canopy: None.

(E) Subcanopy: *Broussaisia*, *Cheirodendron*, *Leptecophylla*, *Metrosideros*.

(F) Understory: *Bryophytes*, *Ferns*, *Coprosma*, *Dubautia*, *Kadua*, *Peperomia*.

***Delissea subcordata* (OHA)**

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, and Oahu—Lowland Mesic—Unit 7, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Delissea subcordata* on Oahu. Within these

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units, the physical and biological features of critical habitat are:

- (i) Elevation: Less than 3,300 ft (1,000 m).
- (ii) Annual precipitation: 50 to 75 in (130 to 190 cm).
- (iii) Substrate: Shallow soils, little to no herbaceous layer.
- (iv) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.
- (v) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.
- (vi) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

### *Lobelia gaudichaudii* ssp. *koolauensis* (NCN)

Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Lobelia gaudichaudii* ssp. *koolauensis* on Oahu. Within these units, the physical and biological features of critical habitat are:

- (i) Elevation: Less than 3,300 ft (1,000 m).
- (ii) Annual precipitation: Greater than 75 in (190 cm).
- (iii) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.
- (iv) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.
- (v) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.
- (vi) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

### *Lobelia monostachya* (NCN)

Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, and Oahu—Lowland Mesic—Unit 7, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Lobelia monostachya* on Oahu. Within these units, the physical and biological features of critical habitat are:

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- (i) Elevation: Less than 3,300 ft (1,000 m).
- (ii) Annual precipitation: 50 to 75 in (130 to 190 cm).
- (iii) Substrate: Shallow soils, little to no herbaceous layer.
- (iv) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.
- (v) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.
- (vi) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

### *Lobelia niihauensis* (NCN)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Lobelia niihauensis* on Oahu.

- (i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, and Oahu—Lowland Mesic—Unit 3, the physical and biological features of critical habitat are:
  - (A) Elevation: Less than 3,300 ft (1,000 m).
  - (B) Annual precipitation: 50 to 75 in (130 to 190 cm).
  - (C) Substrate: Shallow soils, little to no herbaceous layer.
  - (D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.
  - (E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Psydrax*, *Pleomele*.
  - (F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.
- (ii) In units Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat are:
  - (A) Elevation: Unrestricted.
  - (B) Annual precipitation: Less than 75 in (190 cm).

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(C) Substrate: Greater than 65 degree slope, rocky talus.

(D) Canopy: None.

(E) Subcanopy: *Antidesma, Chamaesyce, Diospyros, Dodonaea*.

(F) Understory: *Bidens, Eragrostis, Melanthera, Schiedea*.

***Lobelia oahuensis* (NCN)**

Oahu—Lowland Wet—Unit 1, Oahu—Lowland Wet—Unit 2, Oahu—Lowland Wet—Unit 3, Oahu—Lowland Wet—Unit 4, Oahu—Lowland Wet—Unit 5, Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, Oahu—Lowland Wet—Unit 16, Oahu—Montane Wet—Unit 1, Oahu—Wet Cliff—Unit 1, Oahu—Wet Cliff—Unit 2, Oahu—Wet Cliff—Unit 3, Oahu—Wet Cliff—Unit 4, Oahu—Wet Cliff—Unit 5, Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Lobelia oahuensis* on Oahu.

(i) In units Oahu—Lowland Wet—Unit 1, Oahu—Lowland Wet—Unit 2, Oahu—Lowland Wet—Unit 3, Oahu—Lowland Wet—Unit 4, Oahu—Lowland Wet—Unit 5, Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(D) Canopy: *Antidesma, Metrosideros, Myrsine, Pisonia, Psychotria*.

(E) Subcanopy: *Cibotium, Claoxylon, Kadua, Melicope*.

(F) Understory: *Alyxia, Cyrtandra, Dicranopteris, Diplazium, Machaerina, Microlepia*.

(ii) In unit Oahu—Montane Wet—Unit 1, the physical and biological features of critical habitat are:

(A) Elevation: 3,300 to 6,600 ft (1,000 to 2,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Well-developed soils, montane bogs.

(D) Canopy: *Acacia, Charpentiera, Cheirodendron, Metrosideros*.

(E) Subcanopy: *Broussaisia, Cibotium, Eurya, Ilex, Myrsine*.

(F) Understory: *Ferns, Carex, Coprosma, Leptecophylla, Oreobolus, Rhynchospora, Vaccinium*.

(iii) In units Oahu—Wet Cliff—Unit 1, Oahu—Wet Cliff—Unit 2, Oahu—Wet Cliff—Unit 3, Oahu—Wet Cliff—Unit 4, Oahu—Wet Cliff—Unit 5, Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, shallow soils, weathered lava.

(D) Canopy: None.

(E) Subcanopy: *Broussaisia, Cheirodendron, Leptecophylla, Metrosideros*.

(F) Understory: *Bryophytes, Ferns, Coprosma, Dubautia, Kadua, Peperomia*.

***Trematolobelia singularis* (NCN)**

Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, Oahu—Lowland Wet—Unit 16, Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Trematolobelia singularis* on Oahu.

(i) In units Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, Oahu—Lowland Wet—Unit 16, Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8,

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Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(F) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

(ii) In units Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, the physical or biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, shallow soils, weathered lava.

(D) Canopy: None.

(E) Subcanopy: *Broussaisia*, *Cheirodendron*, *Leptecophylla*, *Metrosideros*.

(F) Understory: *Bryophytes*, *Ferns*, *Coprosma*, *Dubautia*, *Kadua*, *Peperomia*.

### FAMILY CARYOPHYLLACEAE

#### *Schiedea hookeri* (NCN)

Oahu—Lowland Dry—Unit 1, Oahu—Lowland Dry—Unit 2, Oahu—Lowland Dry—Unit 3, Oahu—Lowland Dry—Unit 9, Oahu—Lowland Dry—Unit 10, Oahu—Lowland Dry—Unit 11, Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Wet—Unit 1, Oahu—Lowland Wet—Unit 2, Oahu—Lowland Wet—Unit 3, Oahu—Lowland Wet—Unit 4, Oahu—Lowland Wet—Unit 5, Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, Oahu—Dry Cliff—Unit 8, Oahu—Wet Cliff—Unit 1, Oahu—Wet Cliff—Unit 2, Oahu—Wet Cliff—Unit 3, Oahu—Wet Cliff—Unit 4, and Oahu—Wet Cliff—Unit 5, identified

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in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Schiedea hookeri* on Oahu.

(i) In units Oahu—Lowland Dry—Unit 1, Oahu—Lowland Dry—Unit 2, Oahu—Lowland Dry—Unit 8, Oahu—Lowland Dry—Unit 10, and Oahu—Lowland Dry—Unit 11, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Less than 50 in (130 cm).

(C) Substrate: Weathered silty loams to stony clay, rocky ledges, little-weathered lava.

(D) Canopy: *Diospyros*, *Myoporum*, *Pleomele*, *Santalum*, *Sapindus*.

(E) Subcanopy: *Chamaesyce*, *Dodonaea*, *Leptecophylla*, *Osteomeles*, *Psydrax*, *Scaevola*, *Wikstroemia*.

(F) Understory: *Alyxia*, *Artemisia*, *Bidens*, *Chenopodium*, *Nephrolepis*, *Peperomia*, *Sicyos*.

(ii) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, and Oahu—Lowland Mesic—Unit 3, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(iii) In units Oahu—Lowland Wet—Unit 1, Oahu—Lowland Wet—Unit 2, Oahu—Lowland Wet—Unit 3, Oahu—Lowland Wet—Unit 4, and Oahu—Lowland Wet—Unit 5, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

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(E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(F) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

(iv) In units Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Less than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, rocky talus.

(D) Canopy: None.

(E) Subcanopy: *Antidesma*, *Chamaesyce*, *Diospyros*, *Dodonaea*.

(F) Understory: *Bidens*, *Eragrostis*, *Melanthera*, *Schiedea*.

(v) In units Oahu—Wet Cliff—Unit 1, Oahu—Wet Cliff—Unit 2, Oahu—Wet Cliff—Unit 3, Oahu—Wet Cliff—Unit 4, and Oahu—Wet Cliff—Unit 5, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, shallow soils, weathered lava.

(D) Canopy: None.

(E) Subcanopy: *Broussaisia*, *Cheirodendron*, *Leptecophylla*, *Metrosideros*.

(F) Understory: Bryophytes, Ferns, *Coprosma*, *Dubautia*, *Kadua*, *Peperomia*.

***Schiedea kaalae* (NCN)**

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, Oahu—Lowland Mesic—Unit 7, Oahu—Lowland Wet—Unit 1, Oahu—Lowland Wet—Unit 2, Oahu—Lowland Wet—Unit 3, Oahu—Lowland Wet—Unit 4, Oahu—Lowland Wet—Unit 5, Oahu—Wet Cliff—Unit 1, Oahu—Wet Cliff—Unit 2, Oahu—Wet Cliff—Unit 3, Oahu—Wet Cliff—Unit 4, Oahu—Wet Cliff—Unit 5, Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of

this section, constitute critical habitat for *Schiedea kaalae* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, and Oahu—Lowland Mesic—Unit 7, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Lowland Wet—Unit 1, Oahu—Lowland Wet—Unit 2, Oahu—Lowland Wet—Unit 3, Oahu—Lowland Wet—Unit 4, and Oahu—Lowland Wet—Unit 5, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(F) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

(iii) In units Oahu—Wet Cliff—Unit 1, Oahu—Wet Cliff—Unit 2, Oahu—Wet Cliff—Unit 3, Oahu—Wet Cliff—Unit 4, Oahu—Wet Cliff—Unit 5, Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, shallow soils, weathered lava.

(D) Canopy: None.

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(E) Subcanopy: *Broussaisia*, *Cheirodendron*, *Leptecophylla*, *Metrosideros*.

(F) Understory: Bryophytes, Ferns, *Coprosma*, *Dubautilia*, *Kadua*, *Peperomia*.

### *Schiedea kealiae* (MAOLIOLI)

Oahu—Coastal—Unit 1, Oahu—Coastal—Unit 13, Oahu—Coastal—Unit 14, Oahu—Coastal—Unit 15, Oahu—Lowland Dry—Unit 1, Oahu—Lowland Dry—Unit 2, Oahu—Lowland Dry—Unit 8, Oahu—Lowland Dry—Unit 9, Oahu—Lowland Dry—Unit 10, and Oahu—Lowland Dry—Unit 11, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Schiedea kealiae* on Oahu.

(i) In unit Oahu—Coastal—Unit 1, Oahu—Coastal—Unit 13, Oahu—Coastal—Unit 14, and Oahu—Coastal—Unit 15, the physical and biological features of critical habitat are:

(A) Elevation: Less than 980 ft (300 m).

(B) Annual precipitation: Less than 20 in (50 cm).

(C) Substrate: Well-drained, calcareous, talus slopes; weathered clay soils; ephemeral pools; mudflats.

(D) Canopy: *Hibiscus*, *Myoporum*, *Santalum*, *Scaevola*.

(E) Subcanopy: *Gossypium*, *Sida*, *Vitex*.

(F) Understory: *Eragrostis*, *Jacquemontia*, *Lyceum*, *Nama*, *Sesuvium*, *Sporobolus*, *Vigna*.

(ii) In units Oahu—Lowland Dry—Unit 1, Oahu—Lowland Dry—Unit 2, Oahu—Lowland Dry—Unit 8, Oahu—Lowland Dry—Unit 9, Oahu—Lowland Dry—Unit 10, and Oahu—Lowland Dry—Unit 11, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Less than 50 in (130 cm).

(C) Substrate: Weathered silty loams to stony clay, rocky ledges, little-weathered lava.

(D) Canopy: *Diospyros*, *Myoporum*, *Pleomele*, *Santalum*, *Sapindus*.

(E) Subcanopy: *Chamaesyce*, *Dodonaea*, *Leptecophylla*, *Osteomeles*, *Psydrax*, *Scaevola*, *Wikstroemia*.

(F) Understory: *Alyxia*, *Artemisia*, *Bidens*, *Chenopodium*, *Nephrolepis*.

*Peperomia*, *Plumbago*, *Sicyos*, *Sida*, *Waltheria*.

### *Schiedea nuttallii* (NCN)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, and Oahu—Lowland Mesic—Unit 7, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Schiedea nuttallii* on Oahu. Within these units, the physical and biological features of critical habitat are:

(i) Elevation: Less than 3,300 ft (1,000 m).

(ii) Annual precipitation: 50 to 75 in (130 to 190 cm).

(iii) Substrate: Shallow soils, little to no herbaceous layer.

(iv) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(v) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(vi) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

### *Schiedea obovata* (NCN)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Schiedea obovata* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, and Oahu—Lowland Mesic—Unit 3, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

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(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Less than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, rocky talus.

(D) Canopy: None.

(E) Subcanopy: *Antidesma*, *Chamaesyce*, *Diospyros*, *Dodonaea*.

(F) Understory: *Bidens*, *Eragrostis*, *Melanthera*, *Schiedea*.

***Schiedea trinervis* (NCN)**

Oahu—Montane Wet—Unit 1, Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, Oahu—Dry Cliff—Unit 8, Oahu—Wet Cliff—Unit 1, Oahu—Wet Cliff—Unit 2, Oahu—Wet Cliff—Unit 3, Oahu—Wet Cliff—Unit 4, and Oahu—Wet Cliff—Unit 5, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Schiedea trinervis* on Oahu.

(i) In unit Oahu—Montane Wet—Unit 1, the physical and biological features of critical habitat are:

(A) Elevation: 3,300 to 6,600 ft (1,000 to 2,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Well-developed soils, montane bogs.

(D) Canopy: *Acacia*, *Charpentiera*, *Cheirodendron*, *Metrosideros*.

(E) Subcanopy: *Broussaisia*, *Cibotium*, *Eurya*, *Ilex*, *Myrsine*.

(F) Understory: Ferns, *Carex*, *Coprosma*, *Leptecophylla*, *Oreobolus*, *Rhynchospora*, *Vaccinium*.

(ii) In units Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit

7b, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Less than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, rocky talus.

(D) Canopy: None.

(E) Subcanopy: *Antidesma*, *Chamaesyce*, *Diospyros*, *Dodonaea*.

(F) Understory: *Bidens*, *Eragrostis*, *Melanthera*, *Schiedea*.

(iii) In units Oahu—Wet Cliff—Unit 1, Oahu—Wet Cliff—Unit 2, Oahu—Wet Cliff—Unit 3, Oahu—Wet Cliff—Unit 4, and Oahu—Wet Cliff—Unit 5, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, shallow soils, weathered lava.

(D) Canopy: None.

(E) Subcanopy: *Broussaisia*, *Cheirodendron*, *Leptecophylla*, *Metrosideros*.

(F) Understory: Bryophytes, Ferns, *Coprosma*, *Dubaustia*, *Kadua*, *Peperomia*.

***Silene lanceolata* (NCN)**

Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Silene lanceolata* on Oahu. Within these units, the physical and biological features of critical habitat are:

(i) Elevation: Unrestricted.

(ii) Annual precipitation: Less than 75 in (190 cm).

(iii) Substrate: Greater than 65 degree slope, rocky talus.

(iv) Canopy: None.

(v) Subcanopy: *Antidesma*, *Chamaesyce*, *Diospyros*, *Dodonaea*.

(vi) Understory: *Bidens*, *Eragrostis*, *Melanthera*, *Schiedea*.

***Silene perlmanii* (NCN)**

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2,

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Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Silene perlmanii* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, and Oahu—Lowland Mesic—Unit 3, the physical or biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Less than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, rocky talus.

(D) Canopy: None.

(E) Subcanopy: *Antidesma*, *Chamaesyce*, *Diospyros*, *Dodonaea*.

(F) Understory: *Bidens*, *Eragrostis*, *Melanthera*, *Schiedea*.

### FAMILY CONVOLVULACEAE

#### *Bonamia menziesii* (NCN)

Oahu—Lowland Dry—Unit 1, Oahu—Lowland Dry—Unit 2, Oahu—Lowland Dry—Unit 8, Oahu—Lowland Dry—Unit 9, Oahu—Lowland Dry—Unit 10, Oahu—Lowland Dry—Unit 11, Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, Oahu—Lowland

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Mesic—Unit 7, Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Bonamia menziesii* on Oahu.

(i) In units Oahu—Lowland Dry—Unit 1, Oahu—Lowland Dry—Unit 2, Oahu—Lowland Dry—Unit 8, Oahu—Lowland Dry—Unit 9, Oahu—Lowland Dry—Unit 10, and Oahu—Lowland Dry—Unit 11, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Less than 50 in (130 cm).

(C) Substrate: Weathered silty loams to stony clay, rocky ledges, little-weathered lava.

(D) Canopy: *Diospyros*, *Myoporum*, *Pleomele*, *Santalum*, *Sapindus*.

(E) Subcanopy: *Chamaesyce*, *Dodonaea*, *Leptecophylla*, *Osteomeles*, *Psydrax*, *Scaevola*, *Wikstroemia*.

(F) Understory: *Alyxia*, *Artemisia*, *Bidens*, *Chenopodium*, *Nephrolepis*, *Peperomia*, *Plumbago*, *Sicyos*, *Sida*, *Waltheria*.

(ii) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, and Oahu—Lowland Mesic—Unit 7, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(iii) In units Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry

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Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat are:

- (A) Elevation: Unrestricted.
- (B) Annual precipitation: Less than 75 in (190 cm).
- (C) Substrate: Greater than 65 degree slope, rocky talus.
- (D) Canopy: None.
- (E) Subcanopy: *Antidesma, Chamaesyce, Diospyros, Dodonaea.*
- (F) Understory: *Bidens, Eragrostis, Melanthera, Schiedea.*

**FAMILY CYPERACEAE*****Cyperus pannatiformis* (NCN)**

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, and Oahu—Lowland Mesic—Unit 3, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Cyperus pannatiformis* on Oahu. Within these units, the physical and biological features of critical habitat are:

- (i) Elevation: Less than 3,300 ft (1,000 m).

(ii) Annual precipitation: 50 to 75 in (130 to 190 cm).

(iii) Substrate: Shallow soils, little to no herbaceous layer.

(iv) Canopy: *Acacia, Diospyros, Metrosideros, Myrsine, Pouteria, Santalum.*

(v) Subcanopy: *Dodonaea, Freycinetia, Leptecophylla, Melanthera, Osteomeles, Pleomele, Psydrax.*

(vi) Understory: *Carex, Dicranopteris, Diplazium, Elaphoglossum, Peperomia.*

***Cyperus trachysanthos* (PUUKAA)**

Oahu—Coastal—Unit 9, Oahu—Coastal—Unit 11, Oahu—Coastal—Unit 12, and Oahu—Lowland Dry—Unit 7, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Cyperus trachysanthos* on Oahu.

(i) In units Oahu—Coastal—Unit 9, Oahu—Coastal—Unit 11, and Oahu—Coastal—Unit 12, the physical and biological features of critical habitat are:

- (A) Elevation: Less than 980 ft (300 m).

(B) Annual precipitation: Less than 20 in (50 cm).

(C) Substrate: Well-drained, calcareous, talus slopes; weathered clay soils; seasonal wetlands; mudflats.

(D) Canopy: *Hibiscus, Myoporum, Santalum, Scaevola.*

(E) Subcanopy: *Gossypium, Sida, Vitex.*

(F) Understory: *Eragrostis, Jacquemontia, Lyceum, Nama, Sesuvium, Sporobolus, Vigna.*

(ii) In unit Oahu—Lowland Dry—Unit 7, the physical and biological features of critical habitat are:

- (A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Less than 50 in (130 cm).

(C) Substrate: Weathered silty loams to stony clay, rocky ledges, little-weathered lava, seasonal wetlands.

(D) Canopy: *Diospyros, Myoporum, Pleomele, Santalum, Sapindus.*

(E) Subcanopy: *Chamaesyce, Dodonaea, Leptecophylla, Osteomeles, Psydrax, Scaevola, Wikstroemia.*

(F) Understory: *Alyxia, Artemisia, Bidens, Chenopodium, Nephrolepis, Peperomia, Plumbago, Sicyos, Sida, Waltheria.*

**FAMILY EUPHORBIACEAE*****Chamaesyce celastroides* var. *kaenana* (AKOKO)**

Oahu—Coastal—Unit 1, Oahu—Coastal—Unit 13, Oahu—Coastal—Unit 14, Oahu—Coastal—Unit 15, Oahu—Lowland Dry—Unit 1, Oahu—Lowland Dry—Unit 2, Oahu—Lowland Dry—Unit 8, Oahu—Lowland Dry—Unit 9, Oahu—Lowland Dry—Unit 10, Oahu—Lowland Dry—Unit 11, Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, and Oahu—Lowland Mesic—Unit 7, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Chamaesyce celastroides* var. *kaenana* on Oahu.

(i) In units Oahu—Coastal—Unit 1, Oahu—Coastal—Unit 13, Oahu—Coastal—Unit 14, and Oahu—Coastal—Unit 15, the physical and biological features of critical habitat are:

- (A) Elevation: Less than 980 ft (300 m).

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(B) Annual precipitation: Less than 20 in (50 cm).

(C) Substrate: Well-drained, calcareous, talus slopes; weathered clay soils; ephemeral pools; mudflats.

(D) Canopy: *Hibiscus*, *Myoporum*, *Santalum*, *Scaevola*.

(E) Subcanopy: *Gossypium*, *Sida*, *Vitex*.

(F) Understory: *Eragrostis*, *Jacquemontia*, *Lyceum*, *Nama*, *Sesuvium*, *Sporobolus*, *Vigna*.

(ii) In units Oahu—Lowland Dry—Unit 1, Oahu—Lowland Dry—Unit 2, Oahu—Lowland Dry—Unit 8, Oahu—Lowland Dry—Unit 9, Oahu—Lowland Dry—Unit 10, and Oahu—Lowland Dry—Unit 11, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Less than 50 in (130 cm).

(C) Substrate: Weathered silty loams to stony clay, rocky ledges, little-weathered lava.

(D) Canopy: *Diospyros*, *Myoporum*, *Pleomele*, *Santalum*, *Sapindus*.

(E) Subcanopy: *Chamaesyce*, *Dodonaea*, *Leptecophylla*, *Osteomeles*, *Psydrax*, *Scaevola*, *Wikstroemia*.

(F) Understory: *Alyxia*, *Artemisia*, *Bidens*, *Chenopodium*, *Nephrolepis*, *Peperomia*, *Plumbago*, *Sicyos*, *Sida*, *Waltheria*.

(iii) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, and Oahu—Lowland Mesic—Unit 7, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

### *Chamaesyce deppeana* (AKOKO)

Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Chamaesyce deppeana* on Oahu. Within these units, the physical and biological features of critical habitat are:

(i) Elevation: Unrestricted.

(ii) Annual precipitation: Greater than 75 in (190 cm).

(iii) Substrate: Greater than 65 degree slope, shallow soils, weathered lava.

(iv) Canopy: None.

(v) Subcanopy: *Broussaisia*, *Cheirodendron*, *Leptecophylla*, *Metrosideros*.

(vi) Understory: *Bryophytes*, *Ferns*, *Coprosma*, *Dubaustia*, *Kadua*, *Peperomia*.

### *Chamaesyce herbstii* (AKOKO)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Chamaesyce herbstii* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, and Oahu—Lowland Mesic—Unit 3, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat are:

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Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat are:

- (A) Elevation: Unrestricted.
- (B) Annual precipitation: Less than 75 in (190 cm).
- (C) Substrate: Greater than 65 degree slope, rocky talus.
- (D) Canopy: None.
- (E) Subcanopy: *Antidesma, Chamaesyce, Diospyros, Dodonaea.*
- (F) Understory: *Bidens, Eragrostis, Melanthera, Schiedea.*

***Chamaesyce kuwaleana* (AKOKO)**

Oahu—Coastal—Unit 2, Oahu—Coastal—Unit 3, Oahu—Coastal—Unit 4, Oahu—Coastal—Unit 5, Oahu—Coastal—Unit 6, Oahu—Coastal—Unit 7, Oahu—Coastal—Unit 8, Oahu—Coastal—Unit 9, Oahu—Coastal—Unit 10, Oahu—Coastal—Unit 11, Oahu—Coastal—Unit 12, Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Chamaesyce kuwaleana* on Oahu.

(i) In units Oahu—Coastal—Unit 2, Oahu—Coastal—Unit 3, Oahu—Coastal—Unit 4, Oahu—Coastal—Unit 5, Oahu—Coastal—Unit 6, Oahu—Coastal—Unit 7, Oahu—Coastal—Unit 8, Oahu—Coastal—Unit 9, Oahu—Coastal—Unit 10, Oahu—Coastal—Unit 11, and Oahu—Coastal—Unit 12, the physical and biological features of critical habitat are:

- (A) Elevation: Less than 980 ft (300 m).
- (B) Annual precipitation: Less than 20 in (50 cm).
- (C) Substrate: Well-drained, calcareous, talus slopes; weathered clay soils; ephemeral pools; mudflats.
- (D) Canopy: *Hibiscus, Myoporum, Santalum, Scaevola.*
- (E) Subcanopy: *Gossypium, Sida, Vitex.*
- (F) Understory: *Eragrostis, Jacquemontia, Lyceum, Nama, Sesuvium, Sporobolus, Vigna.*

(ii) In units Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry

Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat are:

- (A) Elevation: Unrestricted.
- (B) Annual precipitation: Less than 75 in (190 cm).
- (C) Substrate: Greater than 65 degree slope, rocky talus.
- (D) Canopy: None.
- (E) Subcanopy: *Antidesma, Chamaesyce, Diospyros, Dodonaea.*
- (F) Understory: *Bidens, Eragrostis, Melanthera, Schiedea.*

***Chamaesyce rockii* (AKOKO)**

Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, Oahu—Lowland Wet—Unit 16, Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Chamaesyce rockii* on Oahu.

(i) In units Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, the physical and biological features of critical habitat are:

- (A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(D) Canopy: *Antidesma, Metrosideros, Myrsine, Pisonia, Psychotria.*

(E) Subcanopy: *Cibotium, Claoxylon, Kadua, Melicope.*

(F) Understory: *Alyxia, Cyrtandra, Dicranopteris, Diplazium, Machaerina, Microlepia.*

(ii) In units Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—

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Wet Cliff—Unit 8, the physical and biological features of critical habitat are:

- (A) Elevation: Unrestricted.
- (B) Annual precipitation: Greater than 75 in (190 cm).
- (C) Substrate: Greater than 65 degree slope, shallow soils, weathered lava.
- (D) Canopy: None.
- (E) Subcanopy: *Broussaisia*, *Cheirodendron*, *Leptecophylla*, *Metrosideros*.
- (F) Understory: Bryophytes, Ferns, *Coprosma*, *Dubautilia*, *Kadua*, *Peperomia*.

*Chamaesyce skottsbergii* var. *skottsbergii* (EWA PLAINS AKOKO)

Oahu—Lowland Dry—Unit 8, Oahu—Lowland Dry—Unit 9, Oahu—Lowland Dry—Unit 10, and Oahu—Lowland Dry—Unit 11, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Chamaesyce skottsbergii* var. *skottsbergii* on Oahu. Within these units, the physical and biological features of critical habitat are:

- (i) Elevation: Less than 3,300 ft (1,000 m).
- (ii) Annual precipitation: Less than 50 in (130 cm).
- (iii) Substrate: Weathered silty loams to stony clay, rocky ledges, little-weathered lava.
- (iv) Canopy: *Diospyros*, *Myoporum*, *Pleomele*, *Santalum*, *Sapindus*.
- (v) Subcanopy: *Chamaesyce*, *Dodonaea*, *Leptecophylla*, *Osteomeles*, *Psydrax*, *Scaevola*, *Wikstroemia*.
- (vi) Understory: *Alyxia*, *Artemisia*, *Bidens*, *Chenopodium*, *Nephrolepis*, *Peperomia*, *Plumbago*, *Sicyos*, *Sida*, *Waltheria*.
- (vii) Coral outcrop substrate.

*Euphorbia haeleeleana* (AKOKO)

Oahu—Lowland Dry—Unit 1, Oahu—Lowland Dry—Unit 2, Oahu—Lowland Dry—Unit 8, Oahu—Lowland Dry—Unit 9, Oahu—Lowland Dry—Unit 10, Oahu—Lowland Dry—Unit 11, Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, and Oahu—Lowland Mesic—Unit 3, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Euphorbia haeleeleana* on Oahu.

- (i) In units Oahu—Lowland Dry—Unit 1, Oahu—Lowland Dry—Unit 2, Oahu—Lowland Dry—Unit 8, Oahu—Lowland

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Dry—Unit 9, Oahu—Lowland Dry—Unit 10, and Oahu—Lowland Dry—Unit 11, the physical and biological features of critical habitat are:

- (A) Elevation: Less than 3,300 ft (1,000 m).
  - (B) Annual precipitation: Less than 50 in (130 cm).
  - (C) Substrate: Weathered silty loams to stony clay, rocky ledges, little-weathered lava.
  - (D) Canopy: *Diospyros*, *Myoporum*, *Pleomele*, *Santalum*, *Sapindus*.
  - (E) Subcanopy: *Chamaesyce*, *Dodonaea*, *Leptecophylla*, *Osteomeles*, *Psydrax*, *Scaevola*, *Wikstroemia*.
  - (F) Understory: *Alyxia*, *Artemisia*, *Bidens*, *Chenopodium*, *Nephrolepis*, *Peperomia*, *Plumbago*, *Sicyos*, *Sida*, *Waltheria*.
- (ii) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, and Oahu—Lowland Mesic—Unit 3, the physical and biological features of critical habitat are:
- (A) Elevation: Less than 3,300 ft (1,000 m).
  - (B) Annual precipitation: 50 to 75 in (130 to 190 cm).
  - (C) Substrate: Shallow soils, little to no herbaceous layer.
  - (D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.
  - (E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.
  - (F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

*Flueggea neowawraea* (MEHAMEHAME)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Flueggea neowawraea* on Oahu.

- (i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, and Oahu—Lowland Mesic—Unit 3, the physical and biological features of critical habitat are:

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(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 5, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Less than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, rocky talus.

(D) Canopy: None.

(E) Subcanopy: *Antidesma*, *Chamaesyce*, *Diospyros*, *Dodonaea*.

(F) Understory: *Bidens*, *Eragrostis*, *Melanthera*, *Schiedea*.

**FAMILY FABACEAE*****Sesbania tomentosa* (OHAII)**

Oahu—Coastal—Unit 1, Oahu—Coastal—Unit 2, Oahu—Coastal—Unit 3, Oahu—Coastal—Unit 4, Oahu—Coastal—Unit 5, Oahu—Coastal—Unit 6, Oahu—Coastal—Unit 7, Oahu—Coastal—Unit 8, Oahu—Coastal—Unit 9, Oahu—Coastal—Unit 10, Oahu—Coastal—Unit 11, Oahu—Coastal—Unit 12, Oahu—Coastal—Unit 13, Oahu—Coastal—Unit 14, and Oahu—Coastal—Unit 15, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Sesbania tomentosa* on Oahu. Within these units, the physical and biological features of critical habitat are:

(i) Elevation: Less than 980 ft (300 m).

(ii) Annual precipitation: Less than 20 in (50 cm).

(iii) Substrate: Well-drained, calcareous, talus slopes; weathered clay soils; ephemeral pools; mudflats.

(iv) Canopy: *Hibiscus*, *Myoporum*, *Santalum*, *Scaevola*.

(v) Subcanopy: *Gossypium*, *Sida*, *Vitex*.

(vi) Understory: *Eragrostis*, *Jacquemontia*, *Lyceum*, *Nama*, *Sesuvium*, *Sporobolus*, *Vigna*.

***Vigna o-wahuensis* (NCN)**

Oahu—Coastal—Unit 1, Oahu—Coastal—Unit 2, Oahu—Coastal—Unit 3, Oahu—Coastal—Unit 4, Oahu—Coastal—Unit 5, Oahu—Coastal—Unit 6, Oahu—Coastal—Unit 7, Oahu—Coastal—Unit 8, Oahu—Coastal—Unit 9, Oahu—Coastal—Unit 10, Oahu—Coastal—Unit 11, Oahu—Coastal—Unit 12, Oahu—Coastal—Unit 13, Oahu—Coastal—Unit 14, and Oahu—Coastal—Unit 15, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Vigna o-wahuensis* on Oahu. Within these units, the physical and biological features of critical habitat are:

(i) Elevation: Less than 980 ft (300 m).

(ii) Annual precipitation: Less than 20 in (50 cm).

(iii) Substrate: Well-drained, calcareous, talus slopes; weathered clay soils; ephemeral pools; mudflats.

(iv) Canopy: *Hibiscus*, *Myoporum*, *Santalum*, *Scaevola*.

(v) Subcanopy: *Gossypium*, *Sida*, *Vitex*.

(vi) Understory: *Eragrostis*, *Jacquemontia*, *Lyceum*, *Nama*, *Sesuvium*, *Sporobolus*, *Vigna*.

**FAMILY GENTIANACEAE*****Centaurium sebaeoides* (AWIWI)**

Oahu—Coastal—Unit 1, Oahu—Coastal—Unit 2, Oahu—Coastal—Unit 3, Oahu—Coastal—Unit 4, Oahu—Coastal—Unit 5, Oahu—Coastal—Unit 6, Oahu—Coastal—Unit 7, Oahu—Coastal—Unit 8, Oahu—Coastal—Unit 9, Oahu—Coastal—Unit 10, Oahu—Coastal—Unit 11, Oahu—Coastal—Unit 12, Oahu—Coastal—Unit 13, Oahu—Coastal—Unit 14, and Oahu—Coastal—Unit 15, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Centaurium sebaeoides* on Oahu. Within these units, the physical and biological features of critical habitat are:

(i) Elevation: Less than 980 ft (300 m).

(ii) Annual precipitation: Less than 20 in (50 cm).

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(iii) Substrate: Well-drained, calcareous, talus slopes; weathered clay soils; ephemeral pools; mudflats.

(iv) Canopy: *Hibiscus*, *Myoporum*, *Santalum*, *Scaevola*.

(v) Subcanopy: *Gossypium*, *Sida*, *Vitex*.

(vi) Understory: *Eragrostis*, *Jacquemontia*, *Lyceum*, *Nama*, *Sesuvium*, *Sporobolus*, *Vigna*.

### FAMILY GESNERIACEAE

#### *Cyrtandra dentata* (HAIWALE)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, Oahu—Lowland Mesic—Unit 7, Oahu—Lowland Wet—Unit 1, Oahu—Lowland Wet—Unit 2, Oahu—Lowland Wet—Unit 3, Oahu—Lowland Wet—Unit 4, Oahu—Lowland Wet—Unit 5, Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, Oahu—Lowland Wet—Unit 16, Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Cyrtandra dentata* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, and Oahu—Lowland Mesic—Unit 7, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Lowland Wet—Unit 1, Oahu—Lowland Wet—Unit 2, Oahu—Lowland Wet—Unit 3, Oahu—Lowland Wet—Unit 4, Oahu—Lowland Wet—Unit 5, Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(F) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

(iii) In units Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Less than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, rocky talus.

(D) Canopy: None.

(E) Subcanopy: *Antidesma*, *Chamaesyce*, *Diospyros*, *Dodonaea*.

(F) Understory: *Bidens*, *Eragrostis*, *Melanthera*, *Schiedea*.

#### *Cyrtandra gracilis* (HAIWALE)

Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland

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Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Cyrtandra gracilis* on Oahu. Within these units, the physical and biological features of critical habitat are:

- (i) Elevation: Less than 3,300 ft (1,000 m).
- (ii) Annual precipitation: Greater than 75 in (190 cm).
- (iii) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.
- (iv) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.
- (v) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.
- (vi) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

***Cyrtandra kaulantha* (HAIWALE)**

Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, Oahu—Lowland Wet—Unit 16, Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Cyrtandra kaulantha* on Oahu.

- (i) In units Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, the physical and biological features of critical habitat are:
  - (A) Elevation: Less than 3,300 ft (1,000 m).
  - (B) Annual precipitation: Greater than 75 in (190 cm).
  - (C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.
  - (D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(F) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

(ii) In units Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, the physical and biological features of critical habitat are:

- (A) Elevation: Unrestricted.
- (B) Annual precipitation: Greater than 75 in (190 cm).
- (C) Substrate: Greater than 65 degree slope, shallow soils, weathered lava.
- (D) Canopy: None.
- (E) Subcanopy: *Broussaisia*, *Cheirodendron*, *Leptecophylla*, *Metrosideros*.
- (F) Understory: Bryophytes, Ferns, *Coprosma*, *Dubaustia*, *Kadua*, *Peperomia*.

***Cyrtandra polyantha* (HAIWALE)**

Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, Oahu—Lowland Mesic—Unit 7, Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Cyrtandra polyantha* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, and Oahu—Lowland Mesic—Unit 7, the physical and biological features of critical habitat are:

- (A) Elevation: Less than 3,300 ft (1,000 m).
- (B) Annual precipitation: 50 to 75 in (130 to 190 cm).
- (C) Substrate: Shallow soils, little to no herbaceous layer.
- (D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.
- (E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.
- (F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

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(ii) In units Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, the physical and biological features of critical habitat are:

- (A) Elevation: Less than 3,300 ft (1,000 m).
- (B) Annual precipitation: Greater than 75 in (190 cm).
- (C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.
- (D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.
- (E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.
- (F) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

### *Cyrtandra sessilis* (HAIWALE)

Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, Oahu—Lowland Wet—Unit 16, Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Cyrtandra sessilis* Oahu.

(i) In units Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, the physical and biological features of critical habitat are:

- (A) Elevation: Less than 3,300 ft (1,000 m).
- (B) Annual precipitation: Greater than 75 in (190 cm).
- (C) Substrate: Clays; ashbeds; deep, well-drained soils, lowland bogs.

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(D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(F) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

(ii) In units Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, the physical and biological features of critical habitat are:

- (A) Elevation: Unrestricted.
- (B) Annual precipitation: Greater than 75 in (190 cm).
- (C) Substrate: Greater than 65 degree slope, shallow soils, weathered lava.
- (D) Canopy: None.
- (E) Subcanopy: *Broussaisia*, *Cheirodendron*, *Leptecophylla*, *Metrosideros*.
- (F) Understory: Bryophytes, Ferns, *Coprosma*, *Dubaustia*, *Kadua*, *Peperomia*.

### *Cyrtandra subumbellata* (HAIWALE)

Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, Oahu—Lowland Wet—Unit 16, Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Cyrtandra subumbellata* on Oahu.

(i) In units Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, the physical and biological features of critical habitat are:

- (A) Elevation: Less than 3,300 ft (1,000 m).
- (B) Annual precipitation: Greater than 75 in (190 cm).
- (C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.
- (D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

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(E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(F) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

(ii) In units Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, shallow soils, weathered lava.

(D) Canopy: None.

(E) Subcanopy: *Broussaisia*, *Cheirodendron*, *Leptecophylla*, *Metrosideros*.

(F) Understory: Bryophytes, Ferns, *Coprosma*, *Dubauteia*, *Kadua*, *Peperomia*.

***Cyrtandra viridiflora* (HAIWALE)**

Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, Oahu—Lowland Wet—Unit 16, Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Cyrtandra viridiflora* on Oahu.

(i) In units Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(F) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

(ii) In units Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, shallow soils, weathered lava.

(D) Canopy: None.

(E) Subcanopy: *Broussaisia*, *Cheirodendron*, *Leptecophylla*, *Metrosideros*.

(F) Understory: Bryophytes, Ferns, *Coprosma*, *Dubauteia*, *Kadua*, *Peperomia*.

***Cyrtandra waiolani* (HAIWALE)**

Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Cyrtandra waiolani* on Oahu. Within these units, the physical and biological features of critical habitat are:

(i) Elevation: Less than 3,300 ft (1,000 m).

(ii) Annual precipitation: Greater than 75 in (190 cm).

(iii) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(iv) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(v) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(vi) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

**FAMILY LAMIACEAE*****Phyllostegia hirsuta* (NCN)**

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, Oahu—Lowland Mesic—Unit 7, Oahu—Lowland Wet—Unit 1, Oahu—

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Lowland Wet—Unit 2, Oahu—Lowland Wet—Unit 3, Oahu—Lowland Wet—Unit 4, Oahu—Lowland Wet—Unit 5, Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, Oahu—Lowland Wet—Unit 16, Oahu—Montane Wet—Unit 1, Oahu—Wet Cliff—Unit 1, Oahu—Wet Cliff—Unit 2, Oahu—Wet Cliff—Unit 3, Oahu—Wet Cliff—Unit 4, Oahu—Wet Cliff—Unit 5, Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Phyllostegia hirsuta* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, and Oahu—Lowland Mesic—Unit 7, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Lowland Wet—Unit 1, Oahu—Lowland Wet—Unit 2, Oahu—Lowland Wet—Unit 3, Oahu—Lowland Wet—Unit 4, Oahu—Lowland Wet—Unit 5, Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, the physical and biological features of critical habitat are:

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(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(F) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

(iii) In unit Oahu—Montane Wet—Unit 1, the physical and biological features of critical habitat are:

(A) Elevation: 3,300 to 6,600 ft (1,000 to 2,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Well-developed soils, montane bogs.

(D) Canopy: *Acacia*, *Charpentiera*, *Cheirodendron*, *Metrosideros*.

(E) Subcanopy: *Broussaisia*, *Cibotium*, *Eurya*, *Ilex*, *Myrsine*.

(F) Understory: Ferns, *Carex*, *Coprosma*, *Leptecophylla*, *Oreobolus*, *Rhynchospora*, *Vaccinium*.

(iv) In units Oahu—Wet Cliff—Unit 1, Oahu—Wet Cliff—Unit 2, Oahu—Wet Cliff—Unit 3, Oahu—Wet Cliff—Unit 4, Oahu—Wet Cliff—Unit 5, Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, shallow soils, weathered lava.

(D) Canopy: None.

(E) Subcanopy: *Broussaisia*, *Cheirodendron*, *Leptecophylla*, *Metrosideros*.

(F) Understory: Bryophytes, Ferns, *Coprosma*, *Dubaustia*, *Kadua*, *Peperomia*.

### *Phyllostegia kaalaensis* (NCN)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—

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Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Phyllostegia kaalaensis* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, and Oahu—Lowland Mesic—Unit 3, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Less than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, rocky talus.

(D) Canopy: None.

(E) Subcanopy: *Antidesma*, *Chamaesyce*, *Diospyros*, *Dodonaea*.

(F) Understory: *Bidens*, *Eragrostis*, *Melanthera*, *Schiedea*.

***Phyllostegia mollis* (NCN)**

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, Oahu—Lowland Mesic—Unit 7, Oahu—Lowland Wet—Unit 1, Oahu—Lowland Wet—Unit 2, Oahu—Lowland Wet—Unit 3, Oahu—Lowland Wet—Unit 4, and Oahu—Lowland Wet—Unit 5, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Phyllostegia mollis* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2,

Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, and Oahu—Lowland Mesic—Unit 7, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Lowland Wet—Unit 1, Oahu—Lowland Wet—Unit 2, Oahu—Lowland Wet—Unit 3, Oahu—Lowland Wet—Unit 4, and Oahu—Lowland Wet—Unit 5, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(F) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

***Phyllostegia parviflora* (NCN)**

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, Oahu—Lowland Mesic—Unit 7, Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, Oahu—Lowland Wet—Unit 16, Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, identified in the legal descriptions in

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paragraph (i) of this section, constitute critical habitat for *Phyllostegia parviflora* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, and Oahu—Lowland Mesic—Unit 3, the physical and biological features of critical habitat for *Phyllostegia parviflora* var. *lydgatei* are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, and Oahu—Lowland Mesic—Unit 7, the physical and biological features of critical habitat for *Phyllostegia parviflora* var. *parviflora* are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(iii) In units Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, the physical and biological features of critical habitat for *Phyllostegia parviflora* var. *parviflora* are:

(A) Elevation: Less than 3,300 ft (1,000 m).

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(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(F) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

(iv) In units Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, the physical and biological features of critical habitat for *Phyllostegia parviflora* var. *parviflora* are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, shallow soils, weathered lava.

(D) Canopy: None.

(E) Subcanopy: *Broussaisia*, *Cheirodendron*, *Leptecophylla*, *Metrosideros*.

(F) Understory: Bryophytes, Ferns, *Coprosma*, *Dubaustia*, *Kadua*, *Peperomia*.

### *Stenogyne kanehoana* (NCN)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, and Oahu—Lowland Mesic—Unit 3, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Stenogyne kanehoana* on Oahu. Within these units, the physical and biological features of critical habitat are:

(i) Elevation: Less than 3,300 ft (1,000 m).

(ii) Annual precipitation: 50 to 75 in (130 to 190 cm).

(iii) Substrate: Shallow soils, little to no herbaceous layer.

(iv) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(v) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(vi) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

### FAMILY LOGANIACEAE

#### *Labordia cyrtandrae* (KAMAKAHALA)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—

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Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, Oahu—Lowland Mesic—Unit 7, Oahu—Lowland Wet—Unit 1, Oahu—Lowland Wet—Unit 2, Oahu—Lowland Wet—Unit 3, Oahu—Lowland Wet—Unit 4, Oahu—Lowland Wet—Unit 5, Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, Oahu—Lowland Wet—Unit 16, Oahu—Montane Wet—Unit 1, Oahu—Wet Cliff—Unit 1, Oahu—Wet Cliff—Unit 2, Oahu—Wet Cliff—Unit 3, Oahu—Wet Cliff—Unit 4, Oahu—Wet Cliff—Unit 5, Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Labordia cyrtandrae* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, and Oahu—Lowland Mesic—Unit 7, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Platyzonium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Lowland Wet—Unit 1, Oahu—Lowland Wet—Unit 2, Oahu—Lowland Wet—Unit 3, Oahu—Lowland Wet—Unit 4, Oahu—Lowland Wet—Unit 5, Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12,

Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(F) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

(iii) In unit Oahu—Montane Wet—Unit 1, the physical and biological features of critical habitat are:

(A) Elevation: 3,300 to 6,600 ft (1,000 to 2,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Well-developed soils, montane bogs.

(D) Canopy: *Acacia*, *Charpentiera*, *Cheirodendron*, *Metrosideros*.

(E) Subcanopy: *Broussaisia*, *Cibotium*, *Eurya*, *Ilex*, *Myrsine*.

(F) Understory: Ferns, *Carex*, *Coprosma*, *Leptecophylla*, *Oreobolus*, *Rhynchospora*, *Vaccinium*.

(iv) In units Oahu—Wet Cliff—Unit 1, Oahu—Wet Cliff—Unit 2, Oahu—Wet Cliff—Unit 3, Oahu—Wet Cliff—Unit 4, Oahu—Wet Cliff—Unit 5, Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, shallow soils, weathered lava.

(D) Canopy: None.

(E) Subcanopy: *Broussaisia*, *Cheirodendron*, *Leptecophylla*, *Metrosideros*.

(F) Understory: Bryophytes, Ferns, *Coprosma*, *Dubaustia*, *Kadua*, *Peperomia*.

**FAMILY MALVACEAE*****Abutilon sandwicense* (NCN)**

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—

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Lowland Mesic—Unit 3, Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Abutilon sandwicense* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, and Oahu—Lowland Mesic—Unit 3, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Less than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, rocky talus.

(D) Canopy: None.

(E) Subcanopy: *Antidesma*, *Chamaesyce*, *Diospyros*, *Dodonaea*.

(F) Understory: *Bidens*, *Eragrostis*, *Melanthera*, *Schiedea*.

### *Hibiscus brackenridgei* (MAO HAU HELE)

Oahu—Lowland Dry—Unit 1, Oahu—Lowland Dry—Unit 2, Oahu—Lowland Dry—Unit 8, Oahu—Lowland Dry—Unit 9, Oahu—Lowland Dry—Unit 10, Oahu—Lowland Dry—Unit 11, Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, and Oahu—Lowland Mesic—Unit 3, identified in the legal descriptions in paragraph (i) of this section,

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constitute critical habitat for *Hibiscus brackenridgei* var. *mokuleianus* and *Hibiscus brackenridgei* var. *molokaiana* on Oahu.

(i) In units Oahu—Lowland Dry—Unit 1, Oahu—Lowland Dry—Unit 2, Oahu—Lowland Dry—Unit 8, Oahu—Lowland Dry—Unit 9, Oahu—Lowland Dry—Unit 10, and Oahu—Lowland Dry—Unit 11, the physical and biological features of critical habitat for *Hibiscus brackenridgei* var. *mokuleianus* and *Hibiscus brackenridgei* var. *molokaiana* are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Less than 50 in (130 cm).

(C) Substrate: Weathered silty loams to stony clay, rocky ledges, little-weathered lava.

(D) Canopy: *Diospyros*, *Myoporum*, *Pleomele*, *Santalum*, *Sapindus*.

(E) Subcanopy: *Chamaesyce*, *Dodonaea*, *Leptecophylla*, *Osteomeles*, *Psydrax*, *Scaevola*, *Wikstroemia*.

(F) Understory: *Alyxia*, *Artemisia*, *Bidens*, *Chenopodium*, *Nephrolepis*, *Peperomia*, *Plumbago*, *Sicyos*, *Sida*, *Waltheria*.

(ii) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, and Oahu—Lowland Mesic—Unit 3, the physical and biological features of critical habitat for *Hibiscus brackenridgei* var. *mokuleianus* and *Hibiscus brackenridgei* var. *molokaiana* are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

## FAMILY MYRSINACEAE

### *Myrsine juddii* (KOLEA)

Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—

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Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Myrsine juddii* on Oahu. Within these units, the physical and biological features of critical habitat are:

- (i) Elevation: Less than 3,300 ft (1,000 m).
- (ii) Annual precipitation: Greater than 75 in (190 cm).
- (iii) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.
- (iv) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.
- (v) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.
- (vi) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

**FAMILY MYRTACEAE***Eugenia koolauensis* (NIOI)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, and Oahu—Lowland Mesic—Unit 7, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Eugenia koolauensis* on Oahu. Within these units, the physical and biological features of critical habitat are:

- (i) Elevation: Less than 3,300 ft (1,000 m).
- (ii) Annual precipitation: 50 to 75 in (130 to 190 cm).
- (iii) Substrate: Shallow soils, little to no herbaceous layer.
- (iv) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.
- (v) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.
- (vi) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

**FAMILY ORCHIDACEAE***Platanthera holochila* (NCN)

Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland

Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Platanthera holochila* on Oahu. Within these units, the physical and biological features of critical habitat are:

- (i) Elevation: Less than 3,300 ft (1,000 m).
- (ii) Annual precipitation: Greater than 75 in (190 cm).
- (iii) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs and bog hummocks.
- (iv) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.
- (v) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.
- (vi) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

**FAMILY PLANTAGINACEAE***Plantago princeps* (LAUKAHI KUAHIWI)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, Oahu—Lowland Mesic—Unit 7, Oahu—Lowland Wet—Unit 1, Oahu—Lowland Wet—Unit 2, Oahu—Lowland Wet—Unit 3, Oahu—Lowland Wet—Unit 4, Oahu—Lowland Wet—Unit 5, Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, Oahu—Lowland Wet—Unit 16, Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, Oahu—Dry Cliff—Unit 8, Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, identified in the

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legal descriptions in paragraph (i) of this section, constitute critical habitat for *Plantago princeps* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, and Oahu—Lowland Mesic—Unit 7, the physical and biological features of critical habitat for *Plantago princeps* var. *princeps* are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, the physical and biological features of critical habitat for *Plantago princeps* var. *longibracteata* are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(F) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

(iii) In units Oahu—Lowland Wet—Unit 1, Oahu—Lowland Wet—Unit 2, Oahu—Lowland Wet—Unit 3, Oahu—Lowland Wet—Unit 4, Oahu—Lowland Wet—Unit 5, Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—

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Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, the physical and biological features of critical habitat for *Plantago princeps* var. *princeps* are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(F) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

(iv) In units Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat for *Plantago princeps* var. *princeps* are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Less than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, rocky talus.

(D) Canopy: None.

(E) Subcanopy: *Antidesma*, *Chamaesyce*, *Diospyros*, *Dodonaea*.

(F) Understory: *Bidens*, *Eragrostis*, *Melanthera*, *Schiadea*.

(v) In units Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, the physical and biological features of critical habitat for *Plantago princeps* var. *princeps* are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, shallow soils, weathered lava.

(D) Canopy: None.

(E) Subcanopy: *Broussaisia*, *Cheirodendron*, *Leptecophylla*, *Metrosideros*.

(F) Understory: *Bryophytes*, *Ferns*, *Coprosma*, *Dubaustia*, *Kadua*, *Peperomia*.

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(KAMANOMANO)**

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Cenchrus agrimonoides* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, and Oahu—Lowland Mesic—Unit 3, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Less than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, rocky talus.

(D) Canopy: None.

(E) Subcanopy: *Antidesma*, *Chamaesyce*, *Diospyros*, *Dodonaea*.

(F) Understory: *Bidens*, *Eragrostis*, *Melanthera*, *Schiedea*.

***Eragrostis fosbergii* (FOSBERG'S LOVE GRASS)**

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Dry

Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Eragrostis fosbergii* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, and Oahu—Lowland Mesic—Unit 3, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Less than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, rocky talus.

(D) Canopy: None.

(E) Subcanopy: *Antidesma*, *Chamaesyce*, *Diospyros*, *Dodonaea*.

(F) Understory: *Bidens*, *Eragrostis*, *Melanthera*, *Schiedea*.

**FAMILY PRIMULACEAE*****Lysimachia filifolia* (NCN)**

Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Lysimachia filifolia* on Oahu. Within these units, the physical and biological features of critical habitat are:

(i) Elevation: Unrestricted.

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- (ii) Annual precipitation: Greater than 75 in (190 cm).
- (iii) Substrate: Greater than 65 degree slope, shallow soils, weathered lava.
- (iv) Canopy: None.
- (v) Subcanopy: *Broussaisia*, *Cheirodendron*, *Leptecophylla*, *Metrosideros*.
- (vi) Understory: Bryophytes, Ferns, *Coprosma*, *Dubautia*, *Kadua*, *Peperomia*.

### FAMILY RHAMNACEAE

#### *Colubrina oppositifolia* (KAUILA)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, and Oahu—Lowland Mesic—Unit 3, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Colubrina oppositifolia* on Oahu. Within these units, the physical and biological features of critical habitat are:

- (i) Elevation: Less than 3,300 ft (1,000 m).
- (ii) Annual precipitation: 50 to 75 in (130 to 190 cm).
- (iii) Substrate: Shallow soils, little to no herbaceous layer.
- (iv) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.
- (v) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.
- (vi) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

#### *Gouania meyenii* (NCN)

Oahu—Lowland Dry—Unit 1, Oahu—Lowland Dry—Unit 2, Oahu—Lowland Dry—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, Oahu—Lowland Dry—Unit 8, Oahu—Lowland Dry—Unit 9, Oahu—Lowland Dry—Unit 10, Oahu—Lowland Dry—Unit 11, Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Gouania meyenii* on Oahu.

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(i) In units Oahu—Lowland Dry—Unit 1, Oahu—Lowland Dry—Unit 2, Oahu—Lowland Dry—Unit 6, Oahu—Lowland Dry—Unit 7, Oahu—Lowland Dry—Unit 8, Oahu—Lowland Dry—Unit 9, Oahu—Lowland Dry—Unit 10, and Oahu—Lowland Dry—Unit 11, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Less than 50 in (130 cm).

(C) Substrate: Weathered silty loams to stony clay, rocky ledges, little-weathered lava.

(D) Canopy: *Diospyros*, *Myoporum*, *Pleomele*, *Santalum*, *Sapindus*.

(E) Subcanopy: *Chamaesyce*, *Dodonaea*, *Leptecophylla*, *Osteomeles*, *Psydrax*, *Scaevola*, *Wikstroemia*.

(F) Understory: *Alyxia*, *Artemisia*, *Bidens*, *Chenopodium*, *Nephrolepis*, *Peperomia*, *Sicyos*.

(ii) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, and Oahu—Lowland Mesic—Unit 3, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(iii) In units Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Less than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, rocky talus.

(D) Canopy: None.

(E) Subcanopy: *Antidesma*, *Chamaesyce*, *Diospyros*, *Dodonaea*.

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(F) Understory: *Bidens*, *Eragrostis*, *Melanthera*, *Schiedea*.

***Gouania vitifolia* (NCN)**

Oahu—Lowland Dry—Unit 1, Oahu—Lowland Dry—Unit 2, Oahu—Lowland Dry—Unit 8, Oahu—Lowland Dry—Unit 9, Oahu—Lowland Dry—Unit 10, Oahu—Lowland Dry—Unit 11, Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Wet—Unit 1, Oahu—Lowland Wet—Unit 2, Oahu—Lowland Wet—Unit 3, Oahu—Lowland Wet—Unit 4, Oahu—Lowland Wet—Unit 5, Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Gouania vitifolia* on Oahu.

(i) In units Oahu—Lowland Dry—Unit 1, Oahu—Lowland Dry—Unit 2, Oahu—Lowland Dry—Unit 8, Oahu—Lowland Dry—Unit 9, Oahu—Lowland Dry—Unit 10, and Oahu—Lowland Dry—Unit 11, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Less than 50 in (130 cm).

(C) Substrate: Weathered silty loams to stony clay, rocky ledges, little weathered lava.

(D) Canopy: *Diospyros*, *Myoporum*, *Pleomele*, *Santalum*, *Sapindus*.

(E) Subcanopy: *Chamaesyce*, *Dodonaea*, *Leptecophylla*, *Osteomeles*, *Psydrax*, *Scaevola*, *Wikstroemia*.

(F) Understory: *Alyxia*, *Artemisia*, *Bidens*, *Chenopodium*, *Nephrolepis*, *Peperomia*, *Sicyos*.

(ii) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, and Oahu—Lowland Mesic—Unit 3, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(iii) In units Oahu—Lowland Wet—Unit 1, Oahu—Lowland Wet—Unit 2, Oahu—Lowland Wet—Unit 3, Oahu—Lowland Wet—Unit 4, and Oahu—Lowland Wet—Unit 5, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(F) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

(iv) In units Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Less than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, rocky talus.

(D) Canopy: None.

(E) Subcanopy: *Antidesma*, *Chamaesyce*, *Diospyros*, *Dodonaea*.

(F) Understory: *Bidens*, *Eragrostis*, *Melanthera*, *Schiedea*.

**FAMILY RUBIACEAE*****Gardenia manni* (NANU)**

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, Oahu—Lowland Mesic—Unit 7, Oahu—Lowland Wet—Unit 1, Oahu—Lowland Wet—Unit 2, Oahu—Lowland Wet—Unit 3, Oahu—Lowland Wet—Unit 4, Oahu—Lowland Wet—Unit 5,

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Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Gardenia mannii* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, and Oahu—Lowland Mesic—Unit 7, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Lowland Wet—Unit 1, Oahu—Lowland Wet—Unit 2, Oahu—Lowland Wet—Unit 3, Oahu—Lowland Wet—Unit 4, Oahu—Lowland Wet—Unit 5, Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

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(E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(F) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

### *Kadua coriacea* (KIOELE)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, and Oahu—Lowland Mesic—Unit 7, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Kadua coriacea* on Oahu. Within these units, the physical and biological features of critical habitat are:

(i) Elevation: Less than 3,300 ft (1,000 m).

(ii) Annual precipitation: 50 to 75 in (130 to 190 cm).

(iii) Substrate: Shallow soils, little to no herbaceous layer.

(iv) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(v) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(vi) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

### *Kadua degeneri* (NCN)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Kadua degeneri* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, and Oahu—Lowland Mesic—Unit 3, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

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(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Less than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, rocky talus.

(D) Canopy: None.

(E) Subcanopy: *Antidesma*, *Chamaesyce*, *Diospyros*, *Dodonaea*.

(F) Understory: *Bidens*, *Eragrostis*, *Melanthera*, *Schiedea*.

***Kadua parvula* (NCN)**

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Kadua parvula* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, and Oahu—Lowland Mesic—Unit 3, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Less than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, rocky talus.

(D) Canopy: None.

(E) Subcanopy: *Antidesma*, *Chamaesyce*, *Diospyros*, *Dodonaea*.

(F) Understory: *Bidens*, *Eragrostis*, *Melanthera*, *Schiedea*.

***Psychotria hexandra* ssp. *oahuensis*  
(KOPIKO)**

Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, Oahu—Lowland Wet—Unit 16, Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Psychotria hexandra* ssp. *oahuensis* on Oahu.

(i) In units Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

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(F) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

(ii) In units Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, shallow soils, weathered lava.

(D) Canopy: None.

(E) Subcanopy: *Broussaisia*, *Cheirodendron*, *Leptecophylla*, *Metrosideros*.

(F) Understory: *Bryophytes*, *Ferns*, *Coprosma*, *Dubauteia*, *Kadua*, *Peperomia*.

### FAMILY RUTACEAE

#### *Melicope christophersenii* (ALANI)

Oahu—Montane Wet—Unit 1, Oahu—Wet Cliff—Unit 1, Oahu—Wet Cliff—Unit 2, Oahu—Wet Cliff—Unit 3, Oahu—Wet Cliff—Unit 4, and Oahu—Wet Cliff—Unit 5, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Melicope christophersenii* on Oahu.

(i) In unit Oahu—Montane Wet—Unit 1, the physical and biological features of critical habitat are:

(A) Elevation: 3,300 to 6,600 ft (1,000 to 2,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Well-developed soils, montane bogs.

(D) Canopy: *Acacia*, *Charpentiera*, *Cheirodendron*, *Metrosideros*.

(E) Subcanopy: *Broussaisia*, *Cibotium*, *Eurya*, *Ilex*, *Myrsine*.

(F) Understory: *Ferns*, *Carex*, *Coprosma*, *Leptecophylla*, *Oreobolus*, *Rhynchospora*, *Vaccinium*.

(ii) In unit Oahu—Wet Cliff—Unit 1, Oahu—Wet Cliff—Unit 2, Oahu—Wet Cliff—Unit 3, Oahu—Wet Cliff—Unit 4, and Oahu—Wet Cliff—Unit 5, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, shallow soils, weathered lava.

(D) Canopy: None.

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(E) Subcanopy: *Broussaisia*, *Cheirodendron*, *Leptecophylla*, *Metrosideros*.

(F) Understory: *Bryophytes*, *Ferns*, *Coprosma*, *Dubauteia*, *Kadua*, *Peperomia*.

#### *Melicope hiiakae* (ALANI)

Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Melicope hiiakae* on Oahu. Within these units, the physical and biological features of critical habitat are:

(i) Elevation: Less than 3,300 ft (1,000 m).

(ii) Annual precipitation: Greater than 75 in (190 cm).

(iii) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(iv) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(v) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(vi) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

#### *Melicope lydgatei* (ALANI)

Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, Oahu—Lowland Mesic—Unit 7, Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Melicope lydgatei* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, and Oahu—Lowland Mesic—Unit 7, the physical and biological features of critical habitat are:

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(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(F) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

***Melicope makahae* (ALANI)**

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Melicope makahae* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, and Oahu—Lowland Mesic—Unit 3, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Less than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, rocky talus.

(D) Canopy: None.

(E) Subcanopy: *Antidesma*, *Chamaesyce*, *Diospyros*, *Dodonaea*.

(F) Understory: *Bidens*, *Eragrostis*, *Melanthera*, *Schiedea*.

***Melicope pallida* (ALANI)**

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, and Oahu—Lowland Mesic—Unit 3, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Melicope pallida* on Oahu. Within these units, the physical and biological features of critical habitat are:

(i) Elevation: Less than 3,300 ft (1,000 m).

(ii) Annual precipitation: 50 to 75 in (130 to 190 cm).

(iii) Substrate: Shallow soils, little to no herbaceous layer.

(iv) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(v) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(vi) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

***Melicope saint-johnii* (ALANI)**

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—

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Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, Oahu—Lowland Mesic—Unit 7, Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Melicope saint-johnii* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, and Oahu—Lowland Mesic—Unit 7, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Less than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, rocky talus.

(D) Canopy: None.

(E) Subcanopy: *Antidesma*, *Chamaesyce*, *Diospyros*, *Dodonaea*.

(F) Understory: *Bidens*, *Eragrostis*, *Melanthera*, *Schiedea*.

*Platydesma cornuta* var. *cornuta* (NCN)

Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10,

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Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Platydesma cornuta* var. *cornuta* on Oahu. Within these units, the physical and biological features of critical habitat are:

(i) Elevation: Less than 3,300 ft (1,000 m).

(ii) Annual precipitation: Greater than 75 in (190 cm).

(iii) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(iv) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(v) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(vi) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

*Platydesma cornuta* var. *decurrens* (NCN)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Platydesma cornuta* var. *decurrens* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, and Oahu—Lowland Mesic—Unit 3, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

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- (ii) In units Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat are:
- (A) Elevation: Unrestricted.
  - (B) Annual precipitation: Less than 75 in (190 cm).
  - (C) Substrate: Greater than 65 degree slope, rocky talus.
  - (D) Canopy: None.
  - (E) Subcanopy: *Antidesma, Chamaesyce, Diospyros, Dodonaea.*
  - (F) Understory: *Bidens, Eragrostis, Melanthera, Schiedea.*

***Zanthoxylum oahuense* (AE)**

Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Zanthoxylum oahuense* on Oahu. Within these units, the physical and biological features of critical habitat are:

- (i) Elevation: Less than 3,300 ft (1,000 m).
- (ii) Annual precipitation: Greater than 75 in (190 cm).
- (iii) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.
- (iv) Canopy: *Antidesma, Metrosideros, Myrsine, Pisonia, Psychotria.*
- (v) Subcanopy: *Cibotium, Claoxylon, Kadua, Melicope.*
- (vi) Understory: *Alyxia, Cyrtandra, Dicranopteris, Diplazium, Machaerina, Microlepia.*

**FAMILY SAPINDACEAE*****Alectryon macrococcus* (MAHOE)**

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, Oahu—Lowland Mesic—Unit 7, Oahu—Montane Wet—Unit 1, Oahu—

Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Alectryon macrococcus* var. *macrococcus* on Oahu.

- (i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, and Oahu—Lowland Mesic—Unit 7, the physical and biological features of critical habitat are:

- (A) Elevation: Less than 3,300 ft (1,000 m).
- (B) Annual precipitation: 50 to 75 in (130 to 190 cm).
- (C) Substrate: Shallow soils, little to no herbaceous layer.
- (D) Canopy: *Acacia, Diospyros, Metrosideros, Myrsine, Pouteria, Santalum.*
- (E) Subcanopy: *Dodonaea, Freycinetia, Leptecophylla, Melanthera, Osteomeles, Pleomele, Psydrax.*
- (F) Understory: *Carex, Dicranopteris, Diplazium, Elaphoglossum, Peperomia.*

- (ii) In unit Oahu—Montane Wet—Unit 1, the physical and biological features of critical habitat are:

- (A) Elevation: 3,300 to 6,600 ft (1,000 to 2,000 m).
- (B) Annual precipitation: Greater than 75 in (190 cm).
- (C) Substrate: Well-developed soils, montane bogs.
- (D) Canopy: *Acacia, Charpentiera, Cheirodendron, Metrosideros.*
- (E) Subcanopy: *Broussaisia, Cibotium, Eurya, Ilex, Myrsine.*
- (F) Understory: *Ferns, Carex, Coprosma, Leptecophylla, Oreobolus, Rhynchospora, Vaccinium.*

- (iii) In units Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat are:

- (A) Elevation: Unrestricted.
- (B) Annual precipitation: Less than 75 in (190 cm).

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- (C) Substrate: Greater than 65 degree slope, rocky talus.
- (D) Canopy: None.
- (E) Subcanopy: *Antidesma, Chamaesyce, Diospyros, Dodonaea.*
- (F) Understory: *Bidens, Eragrostis, Melanthera, Schiedea.*

### FAMILY SOLANACEAE

*Solanum sandwicense* (POPOLO, AIAKEAKUA)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, and Oahu—Lowland Mesic—Unit 7, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Solanum sandwicense* on Oahu. Within these units, the physical and biological features of critical habitat are:

- (i) Elevation: Less than 3,300 ft (1,000 m).
- (ii) Annual precipitation: 50 to 75 in (130 to 190 cm).
- (iii) Substrate: Shallow soils, little to no herbaceous layer.
- (iv) Canopy: *Acacia, Diospyros, Metrosideros, Myrsine, Pouteria, Santalum.*
- (v) Subcanopy: *Dodonaea, Freycinetia, Leptecophylla, Melanthera, Osteomeles, Pleomele, Psydrax.*
- (vi) Understory: *Carex, Dicranopteris, Diplazium, Elaphoglossum, Peperomia.*

### FAMILY URTICACEAE

*Neraudia angulata* (NCN)

Oahu—Lowland Dry—Unit 1, Oahu—Lowland Dry—Unit 2, Oahu—Lowland Dry—Unit 8, Oahu—Lowland Dry—Unit 9, Oahu—Lowland Dry—Unit 10, Oahu—Lowland Dry—Unit 11, Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Neraudia angulata* on Oahu.

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(i) In units Oahu—Lowland Dry—Unit 1, Oahu—Lowland Dry—Unit 2, Oahu—Lowland Dry—Unit 8, Oahu—Lowland Dry—Unit 9, Oahu—Lowland Dry—Unit 10, and Oahu—Lowland Dry—Unit 11, the physical and biological features of critical habitat for *Neraudia angulata* var. *angulata* and *Neraudia angulata* var. *dentata* are:

- (A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Less than 50 in (130 cm).

(C) Substrate: Weathered silty loams to stony clay, rocky ledges, little-weathered lava.

(D) Canopy: *Diospyros, Myoporum, Pleomele, Santalum, Sapindus.*

(E) Subcanopy: *Chamaesyce, Dodonaea, Leptecophylla, Osteomeles, Psydrax, Scaevola, Wikstroemia.*

(F) Understory: *Alyxia, Artemisia, Bidens, Chenopodium, Nephrolepis, Peperomia, Sicyos.*

(ii) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, and Oahu—Lowland Mesic—Unit 3, the physical and biological features of critical habitat for *Neraudia angulata* var. *angulata* and *Neraudia angulata* var. *dentata* are:

- (A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia, Diospyros, Metrosideros, Myrsine, Pouteria, Santalum.*

(E) Subcanopy: *Dodonaea, Freycinetia, Leptecophylla, Melanthera, Osteomeles, Pleomele, Psydrax.*

(F) Understory: *Carex, Dicranopteris, Diplazium, Elaphoglossum, Peperomia.*

(iii) In units Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat for *Neraudia angulata* var. *angulata* and *Neraudia angulata* var. *dentata* are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Less than 75 in (190 cm).

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(C) Substrate: Greater than 65 degree slope, rocky talus.

(D) Canopy: None.

(E) Subcanopy: *Antidesma, Chamaesyce, Diospyros, Dodonaea*.

(F) Understory: *Bidens, Eragrostis, Melanthera, Schiedea*.

***Urera kaalae* (OPUHE)**

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Wet—Unit 1, Oahu—Lowland Wet—Unit 2, Oahu—Lowland Wet—Unit 3, Oahu—Lowland Wet—Unit 4, and Oahu—Lowland Wet—Unit 5, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Urera kaalae* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, and Oahu—Lowland Mesic—Unit 3, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia, Diospyros, Metrosideros, Myrsine, Pouteria, Santalum*.

(E) Subcanopy: *Dodonaea, Freycinetia, Leptecophylla, Melanthera, Osteomeles, Pleomele, Psydrax*.

(F) Understory: *Carex, Dicranopteris, Diplazium, Elaphoglossum, Peperomia*.

(ii) In units Oahu—Lowland Wet—Unit 1, Oahu—Lowland Wet—Unit 2, Oahu—Lowland Wet—Unit 3, Oahu—Lowland Wet—Unit 4, and Oahu—Lowland Wet—Unit 5, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(D) Canopy: *Antidesma, Metrosideros, Myrsine, Pisonia, Psychotria*.

(E) Subcanopy: *Cibotium, Claoxylon, Kadua, Melicope*.

(F) Understory: *Alyxia, Cyrtandra, Dicranopteris, Diplazium, Machaerina, Microlepia*.

**FAMILY VIOLACEAE*****Isodendrion laurifolium* (AUPAKA)**

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, Oahu—Lowland Mesic—Unit 7, Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Isodendrion laurifolium* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, and Oahu—Lowland Mesic—Unit 7, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia, Diospyros, Metrosideros, Myrsine, Pouteria, Santalum*.

(E) Subcanopy: *Dodonaea, Freycinetia, Leptecophylla, Melanthera, Osteomeles, Pleomele, Psydrax*.

(F) Understory: *Carex, Dicranopteris, Diplazium, Elaphoglossum, Peperomia*.

(ii) In units Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Less than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, rocky talus.

(D) Canopy: None.

(E) Subcanopy: *Antidesma, Chamaesyce, Diospyros, Dodonaea*.

(F) Understory: *Bidens, Eragrostis, Melanthera, Schiedea*.

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### *Isodendrion longifolium* (AUPAKA)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, Oahu—Lowland Mesic—Unit 7, Oahu—Lowland Wet—Unit 1, Oahu—Lowland Wet—Unit 2, Oahu—Lowland Wet—Unit 3, Oahu—Lowland Wet—Unit 4, Oahu—Lowland Wet—Unit 5, Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Isodendrion longifolium* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, and Oahu—Lowland Mesic—Unit 7, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Lowland Wet—Unit 1, Oahu—Lowland Wet—Unit 2, Oahu—Lowland Wet—Unit 3, Oahu—Lowland Wet—Unit 4, Oahu—Lowland Wet—Unit 5, Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland

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Wet—Unit 16, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(F) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

### *Isodendrion pyrifolium* (WAHINE NOHO KULA)

Oahu—Lowland Dry—Unit 1, Oahu—Lowland Dry—Unit 2, Oahu—Lowland Dry—Unit 8, Oahu—Lowland Dry—Unit 9, Oahu—Lowland Dry—Unit 10, Oahu—Lowland Dry—Unit 11, Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Isodendrion pyrifolium* on Oahu.

(i) In units Oahu—Lowland Dry—Unit 1, Oahu—Lowland Dry—Unit 2, Oahu—Lowland Dry—Unit 8, Oahu—Lowland Dry—Unit 9, Oahu—Lowland Dry—Unit 10, and Oahu—Lowland Dry—Unit 11, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Less than 50 in (130 cm).

(C) Substrate: Weathered silty loams to stony clay, rocky ledges, little-weathered lava.

(D) Canopy: *Diospyros*, *Myoporum*, *Pleomele*, *Santalum*, *Sapindus*.

(E) Subcanopy: *Chamaesyce*, *Dodonaea*, *Leptecophylla*, *Osteomeles*, *Psydrax*, *Scaevola*, *Wikstroemia*.

(F) Understory: *Alyxia*, *Artemisia*, *Bidens*, *Chenopodium*, *Nephrolepis*, *Peperomia*, *Sicyos*.

(ii) In units Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit

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7b, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat are:

- (A) Elevation: Unrestricted.
- (B) Annual precipitation: Less than 75 in (190 cm).
- (C) Substrate: Greater than 65 degree slope, rocky talus.
- (D) Canopy: None.
- (E) Subcanopy: *Antidesma, Chamaesyce, Diospyros, Dodonaea.*
- (F) Understory: *Bidens, Eragrostis, Melanthera, Schiedea.*

*Viola chamissoniana* ssp. *chamissoniana*  
(PAMAKANI)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Viola chamissoniana* ssp. *chamissoniana* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, and Oahu—Lowland Mesic—Unit 3, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia, Diospyros, Metrosideros, Myrsine, Pouteria, Santalum.*

(E) Subcanopy: *Dodonaea, Freycinetia, Leptecophylla, Melanthera, Osteomeles, Pleomele, Psydrax.*

(F) Understory: *Carex, Dicranopteris, Diplazium, Elaphoglossum, Peperomia.*

(ii) In units Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat are:

- (A) Elevation: Unrestricted.
- (B) Annual precipitation: Less than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, rocky talus.

(D) Canopy: None.

(E) Subcanopy: *Antidesma, Chamaesyce, Diospyros, Dodonaea.*

(F) Understory: *Bidens, Eragrostis, Melanthera, Schiedea.*

*Viola oahuensis* (NCN)

Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, Oahu—Lowland Wet—Unit 16, Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Viola oahuensis* on Oahu.

(i) In units Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(D) Canopy: *Antidesma, Metrosideros, Myrsine, Pisonia, Psychotria.*

(E) Subcanopy: *Cibotium, Claoxylon, Kadua, Melicope.*

(F) Understory: *Alyxia, Cyrtandra, Dicranopteris, Diplazium, Machaerina, Microlepia.*

(ii) In units Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, shallow soils, weathered lava.

(D) Canopy: None.

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(E) Subcanopy: *Broussaisia*, *Cheirodendron*, *Leptecophylla*, *Metrosideros*.

(F) Understory: Bryophytes, Ferns, *Coprosma*, *Dubautea*, *Kadua*, *Peperomia*.

### FAMILY VISCAEAE

#### *Korthalsella degeneri* (HULUMOA)

Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Korthalsella degeneri* on Oahu. Within these units, the physical and biological features of critical habitat are:

- (i) Elevation: Unrestricted.
- (ii) Annual precipitation: Less than 75 in (190 cm).
- (iii) Substrate: Greater than 65 degree slope, rocky talus.
- (iv) Canopy: None.
- (v) Subcanopy: *Antidesma*, *Chamaesyce*, *Diospyros*, *Dodonaea*.
- (vi) Understory: *Bidens*, *Eragrostis*, *Melanthera*, *Schiedea*.
- (vii) Host plants *Sapindus oahuensis* and *Nestigia sandwicensis*.

#### (2) Ferns and allies.

### FAMILY ADIANTACEAE

#### *Pteris lidgatei* (NCN)

Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Pteris lidgatei* on Oahu. Within these units, the physical and biological features of critical habitat are:

- (i) Elevation: Less than 3,300 ft (1,000 m).
- (ii) Annual precipitation: Greater than 75 in (190 cm).
- (iii) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

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(iv) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(v) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(vi) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

### FAMILY ASPLENIACEAE

#### *Ctenitis squamigera* (PAUOA)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, and Oahu—Lowland Mesic—Unit 7, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Ctenitis squamigera* on Oahu. Within these units, the physical and biological features of critical habitat are:

- (i) Elevation: Less than 3,300 ft (1,000 m).
- (ii) Annual precipitation: 50 to 75 in (130 to 190 cm).
- (iii) Substrate: Shallow soils, little to no herbaceous layer.
- (iv) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.
- (v) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.
- (vi) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

#### *Diellia erecta* (ASPLENIUM-LEAVED DIELLIA)

Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, and Oahu—Lowland Mesic—Unit 7, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Diellia erecta* on Oahu. Within these units, the physical and biological features of critical habitat are:

- (i) Elevation: Less than 3,300 ft (1,000 m).
- (ii) Annual precipitation: 50 to 75 in (130 to 190 cm).
- (iii) Substrate: Shallow soils, little to no herbaceous layer.
- (iv) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

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(v) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(vi) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

*Diellia falcata* (NCN)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, Oahu—Lowland Mesic—Unit 7, Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Diellia falcata* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, and Oahu—Lowland Mesic—Unit 7, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Less than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, rocky talus.

(D) Canopy: None.

(E) Subcanopy: *Antidesma*, *Chamaesyce*, *Diospyros*, *Dodonaea*.

(F) Understory: *Bidens*, *Eragrostis*, *Melanthera*, *Schiedea*.

*Diellia unisora* (NCN)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Diellia unisora* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, and Oahu—Lowland Mesic—Unit 3, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Less than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, rocky talus.

(D) Canopy: None.

(E) Subcanopy: *Antidesma*, *Chamaesyce*, *Diospyros*, *Dodonaea*.

(F) Understory: *Bidens*, *Eragrostis*, *Melanthera*, *Schiedea*.

*Diplazium molokaiense* (NCN)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—

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Lowland Mesic—Unit 3, Oahu—Lowland Wet—Unit 1, Oahu—Lowland Wet—Unit 2, Oahu—Lowland Wet—Unit 3, Oahu—Lowland Wet—Unit 4, and Oahu—Lowland Wet—Unit 5, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Diplazium molokaiense* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, and Oahu—Lowland Mesic—Unit 3, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Lowland Wet—Unit 1, Oahu—Lowland Wet—Unit 2, Oahu—Lowland Wet—Unit 3, Oahu—Lowland Wet—Unit 4, and Oahu—Lowland Wet—Unit 5, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(F) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

### FAMILY GRAMMITIDACEAE

#### *Adenophorus periens* (PENDANT KIHI FERN)

Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14,

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Oahu—Lowland Wet—Unit 15, Oahu—Lowland Wet—Unit 16, Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Adenophorus periens* on Oahu.

(i) In units Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, and Oahu—Lowland Wet—Unit 15, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(F) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

(ii) In units Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, shallow soils, weathered lava.

(D) Canopy: None.

(E) Subcanopy: *Broussaisia*, *Cheirodendron*, *Leptecophylla*, *Metrosideros*.

(F) Understory: Bryophytes, Ferns, *Coprosma*, *Dubaustia*, *Kadua*, *Peperomia*.

### FAMILY LYCOPODIACEAE

#### *Huperzia nutans* (WAWAEIOLE)

Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15,

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Oahu—Lowland Wet—Unit 16, Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Huperzia nutans* on Oahu.

(i) In units Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(F) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

(ii) In units Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, shallow soils, weathered lava.

(D) Canopy: None.

(E) Subcanopy: *Broussaisia*, *Cheirodendron*, *Leptecophylla*, *Metrosideros*.

(F) Understory: *Bryophytes*, *Ferns*, *Coprosma*, *Dubaustia*, *Kadua*, *Peperomia*.

**FAMILY MARSILEACEAE*****Marsilea villosa* (IHI IHI)**

Oahu—Coastal—Unit 9, Oahu—Coastal—Unit 11, Oahu—Coastal—Unit 12, and Oahu—Lowland Dry—Unit 7, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Marsilea villosa* on Oahu.

(i) In units Oahu—Coastal—Unit 9, Oahu—Coastal—Unit 11, and Oahu—

Coastal—Unit 12, the physical and biological features of critical habitat are:

(A) Elevation: Less than 980 ft (300 m).

(B) Annual precipitation: Less than 20 in (50 cm).

(C) Substrate: Well-drained, calcareous, talus slopes; weathered clay soils; seasonal wetlands; mudflats.

(D) Canopy: *Hibiscus*, *Myoporum*, *Santalum*, *Scaevola*.

(E) Subcanopy: *Gossypium*, *Sida*, *Vitex*.

(F) Understory: *Eragrostis*, *Jacquemontia*, *Lyceum*, *Nama*, *Sesuvium*, *Sporobolus*, *Vigna*.

(ii) In unit Oahu—Lowland Dry—Unit 7, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Less than 50 in (130 cm).

(C) Substrate: Weathered silty loams to stony clay, rocky ledges, little-weathered lava, seasonal wetlands.

(D) Canopy: *Diospyros*, *Myoporum*, *Pleomele*, *Santalum*, *Sapindus*.

(E) Subcanopy: *Chamaesyce*, *Dodonaea*, *Leptecophylla*, *Osteomeles*, *Psydrax*, *Scaevola*, *Wikstroemia*.

(F) Understory: *Alyxia*, *Artemisia*, *Bidens*, *Chenopodium*, *Nephrolepis*, *Peperomia*, *Sicyos*.

**FAMILY PTERIDACEAE*****Doryopteris takeuchii* (NCN)**

Oahu—Lowland Dry—Unit 6 and Oahu—Lowland Dry—Unit 7, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Doryopteris takeuchii* on Oahu. Within these units, the physical and biological features of critical habitat are:

(i) Elevation: Less than 3,300 ft (1,000 m).

(ii) Annual precipitation: Less than 50 in (130 cm).

(iii) Substrate: Weathered silty loams to stony clay, rocky ledges, little-weathered lava.

(iv) Canopy: *Diospyros*, *Myoporum*, *Pleomele*, *Santalum*, *Sapindus*.

(v) Subcanopy: *Chamaesyce*, *Dodonaea*, *Leptecophylla*, *Osteomeles*, *Psydrax*, *Scaevola*, *Wikstroemia*.

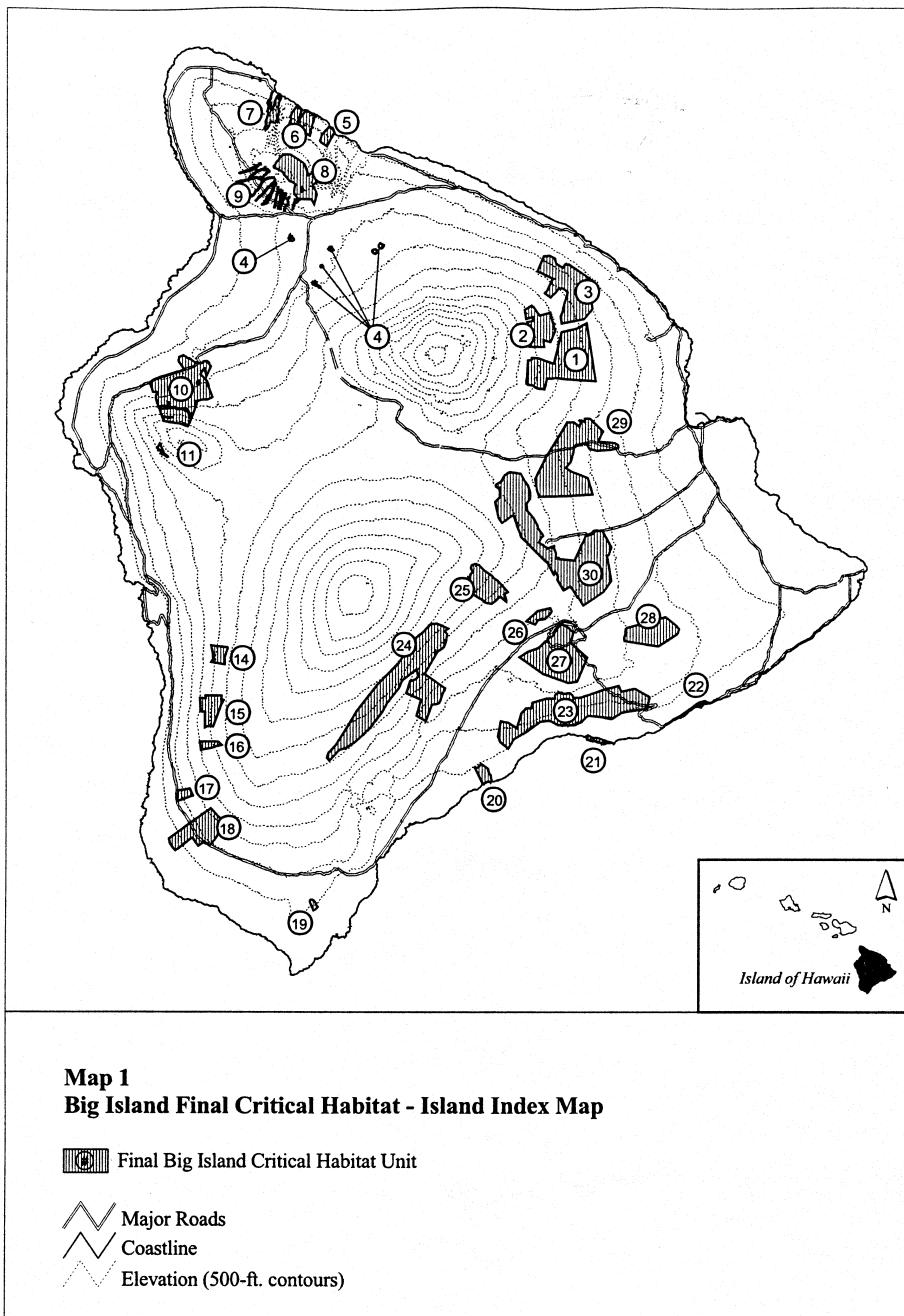
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(vi) Understory: *Alyxia*, *Artemisia*, *Bidens*, *Chenopodium*, *Nephrolepis*, *Peperomia*, *Sicyos*.

(k) *Maps and critical habitat unit descriptions for the island of Hawaii, HI.* The following sections contain the legal descriptions of the critical habitat units designated for the island of Hawaii. Existing manmade features and structures within the boundaries of the mapped unit, such as buildings, roads, aqueducts and other water system features (including but not limited to pumping stations, irrigation ditches, pipelines, siphons, tunnels, water tanks, gaging stations, intakes, reservoirs, diversions, flumes, and wells; existing trails), campgrounds and their immediate surrounding landscaped area, scenic lookouts, remote helicopter landing sites, existing fences, telecommunications towers and associated structures and equipment, elec-

trical power transmission lines and distribution and communication facilities and regularly maintained associated rights-of-way and access ways, radars, telemetry antennas, missile launch sites, arboreta and gardens, heiau (indigenous places of worship or shrines) and other archaeological sites, airports, other paved areas, and lawns and other rural residential landscaped areas do not contain the primary constituent elements described for each species in paragraph (l) of this section and therefore are not included in the critical habitat designations. Coordinates are in UTM Zone 5 with units in meters using North American Datum of 1983 (NAD83). The following map shows the general locations of the 99 critical habitat units designated on the island of Hawaii.

(1) NOTE: Map 1—Index map follows:



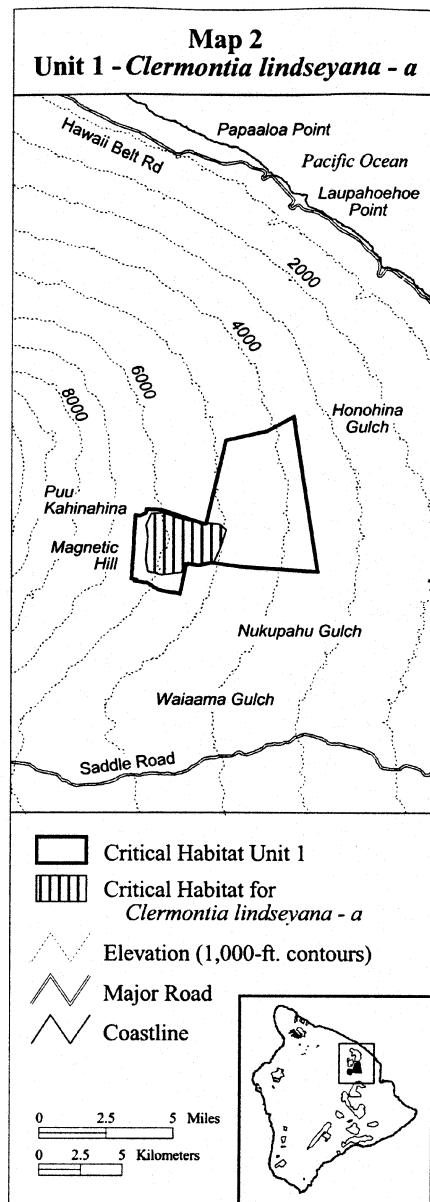
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(2) Hawaii 1—*Clermontia lindseyana*—a  
(1,337 ha, 3,303 ac)

(i) Unit consists of the following 18 boundary points: Start at 259287, 2189980; 258514, 2190124; 258227, 2189531; 257076, 2189405; 256231, 2189611; 256096, 2190304; 256159, 2190978; 256258, 2191715; 256132, 2192452; 256438, 2193135; 257202, 2193171; 258074, 2192865; 259566, 2192515; 260015, 2192551; 260564, 2192488; 260937, 2192137; 260600, 2191095; 260195, 2190187; return to starting point.

(ii) NOTE: Map 2 follows:



(3) Hawaii 1—*Clermontia peleana*—a  
(4,704 ha, 11,624 ac)

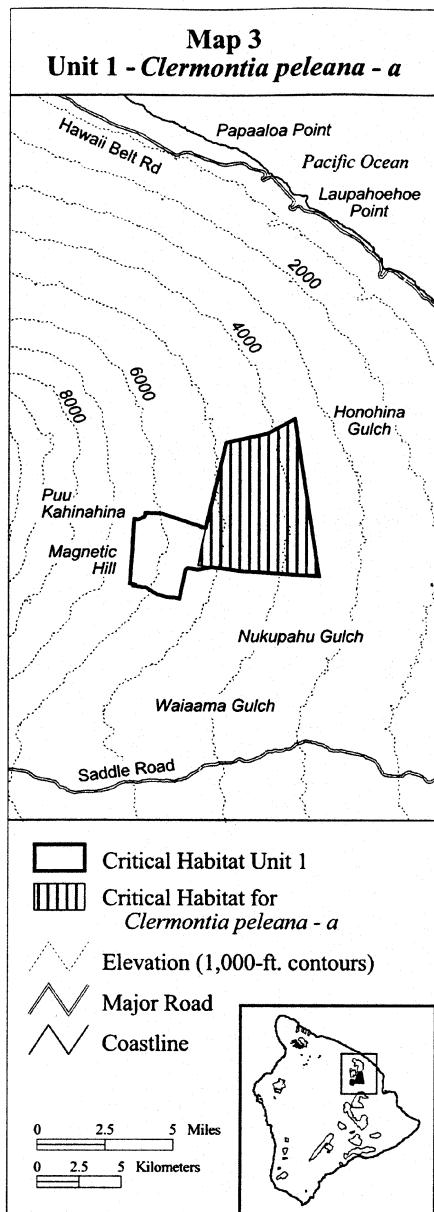
(i) Unit consists of the following seven boundary points: Start at 261799, 2189905; 259290, 2190265; 259437, 2191186; 260905, 2197592; 263380, 2198183; 264962,

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2199047; 266443, 2189598; return to starting point.

(ii) NOTE: Map 3 follows:



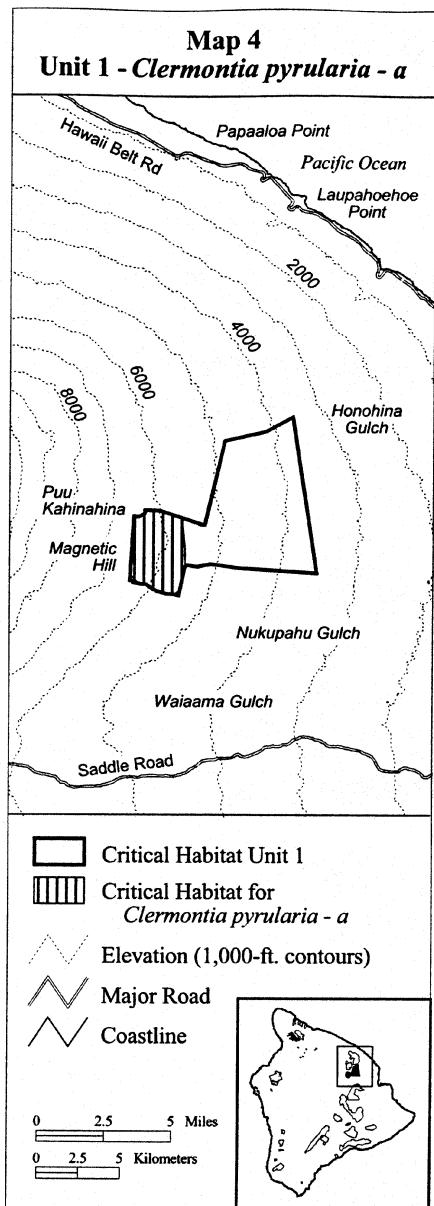
(4) Hawaii 1—*Clermontia pyrularia*—a  
(1,378 ha, 3,405 ac)

(i) Unit consists of the following 21 boundary points: Start at 258551, 2191038; 258529, 2189991; 258210, 2188565; 257890, 2188331; 257487, 2188365; 256896, 2188490; 256215, 2188925; 255931, 2188918; 255675, 2189060; 255456, 2189333; 255283, 2189470; 255306, 2189929; 255346, 2190140; 255408, 2190618; 255387, 2191557; 255496, 2193031; 255782, 2193009; 256122, 2193173; 256270, 2193339; 257054, 2193360; 258360, 2192915; return to starting point.

(ii) NOTE: Map 4 follows:

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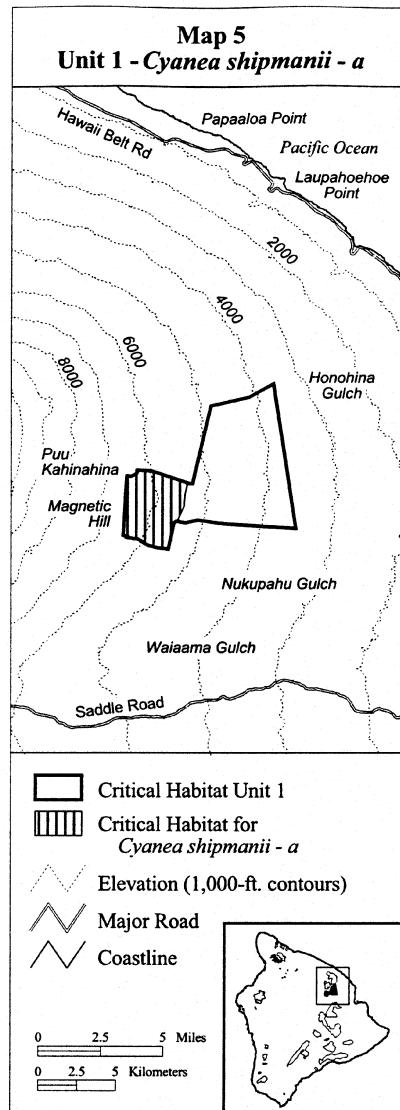


(5) Hawaii 1—*Cyanea shipmanii*—a (1,577 ha, 3,898 ac)

(i) Unit consists of the following 15 boundary points: Start at 258782, 2190167; 258548, 2189979; 258183, 2188260; 257434, 2188452; 256928, 2188480; 256188,

2188929; 255258, 2189156; 255505, 2193009; 255781, 2192991; 256152, 2193174; 256156, 2193377; 257053, 2193355; 259425, 2192593; 259263, 2191816; 259174, 2191010; return to starting point.

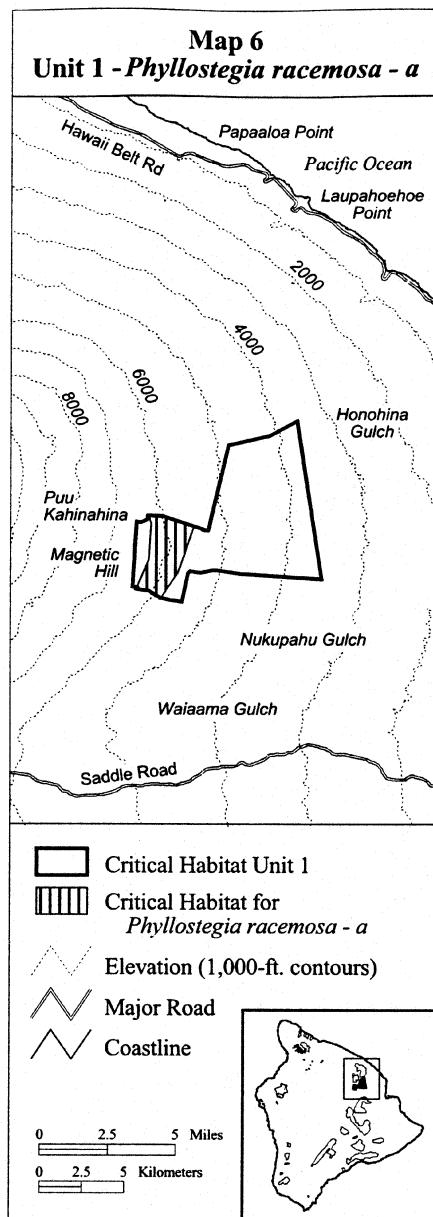
(ii) NOTE: Map 5 follows:



(6) Hawaii 1—*Phyllostegia racemosa*—a  
(938 ha, 2,317 ac)

(i) Unit consists of the following 14 boundary points: Start at 258101, 2190453; 257892, 2189913; 256913, 2188486; 256656, 2188640; 256222, 2188920; 255488, 2189023; 255638, 2189438; 256199, 2190746; 256201, 2190776; 256355, 2192927; 256193, 2193388; 257046, 2193366; 258868, 2192771; 258286, 2190933; return to starting point.

(ii) NOTE: Map 6 follows:

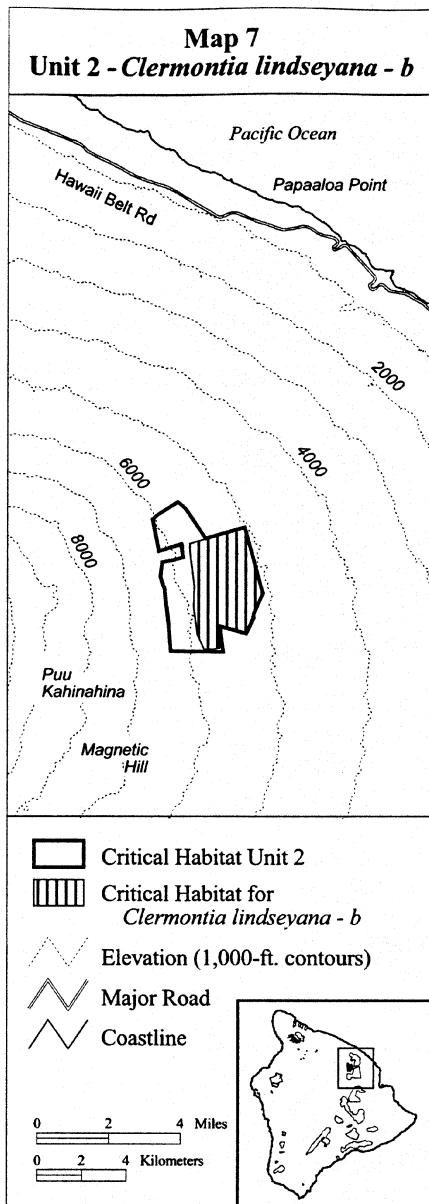
(7) Hawaii 2—*Clermontia lindseyana*—b  
(1,262 ha, 3,119 ac)

(i) Unit consists of the following 11 boundary points: Start at 257292, 2195256; 256959, 2195939; 256806, 2197162;

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256815, 2198142; 256627, 2199661; 256609, 2200056; 259081, 2200802; 259908, 2197800; 259126, 2196047; 257939, 2196380; 257957, 2195319; return to starting point.

(ii) NOTE: Map 7 follows:

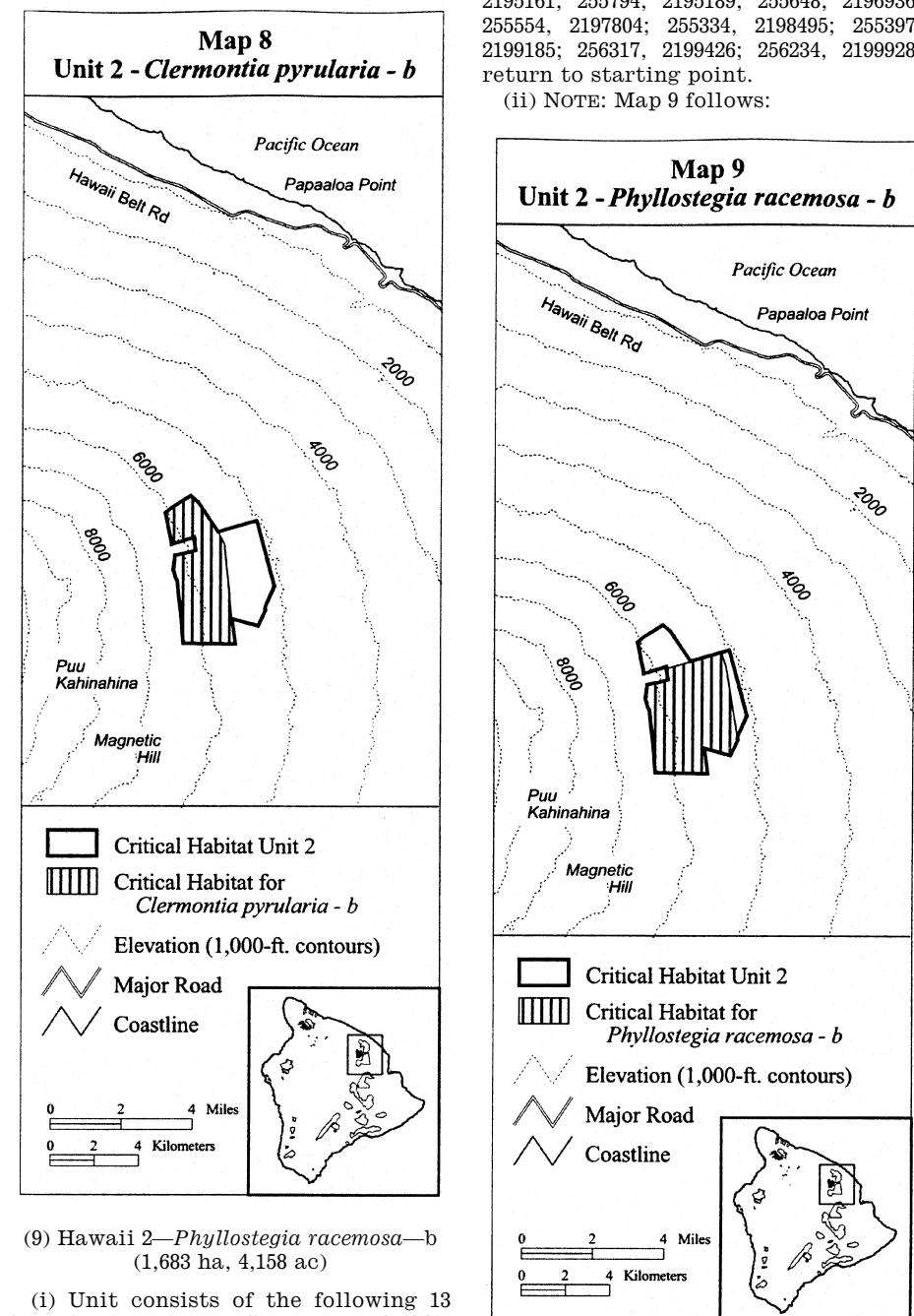


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(8) Hawaii 2—*Clermontia pyrularia*—b  
(1,383 ha, 3,418 ac)

(i) Unit consists of the following 20 boundary points: Start at 255651, 2196455; 255597, 2196941; 255516, 2197725; 255512, 2197761; 255468, 2198050; 255421, 2198130; 255299, 2198552; 255372, 2199203; 256335, 2199414; 256242, 2200024; 255213, 2199704; 254946, 2201156; 255168, 2201360; 256079, 2201937; 256430, 2201672; 257336, 2200280; 257616, 2199751; 257968, 2196298; 258088, 2195186; 255745, 2195208; return to starting point.

(ii) NOTE: Map 8 follows:



(9) Hawaii 2—*Phyllostegia racemosa*—b  
(1,683 ha, 4,158 ac)

(i) Unit consists of the following 13 boundary points: Start at 258723, 2200661; 258940, 2200060; 259480, 2196687; 259164, 2195977; 257990, 2196313; 258115,

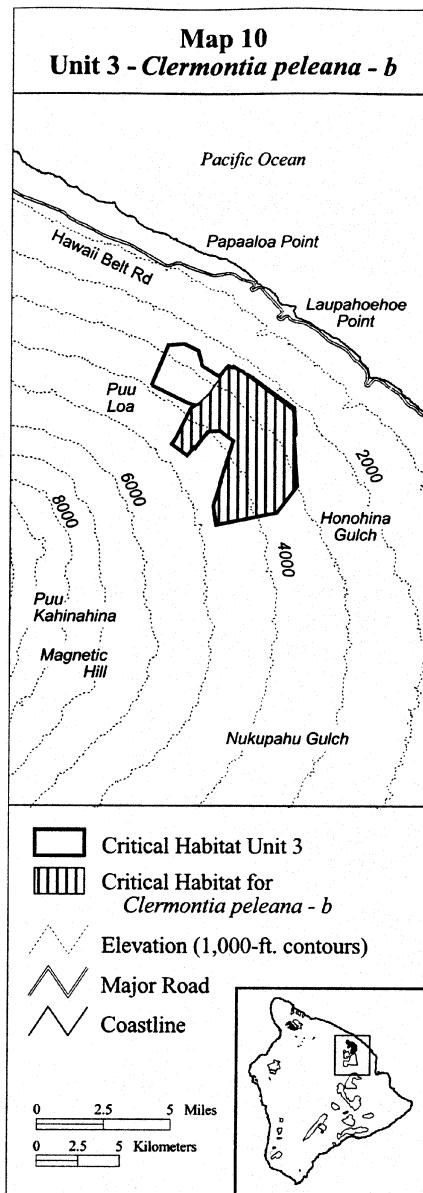
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(10) Hawaii 3—*Clermontia peleana*—b  
(4,098 ha, 10,126 ac)

(i) Unit consists of the following 16 boundary points: Start at 265536, 2206014; 265870, 2201356; 264628, 2199741; 260958, 2198980; 260785, 2200155; 262026, 2204132; 261185, 2204813; 260398, 2204759; 259170, 2203211; 258222, 2203945; 258477, 2204289; 259386, 2206126; 259977, 2206520; 260443, 2206955; 261652, 2208710; 262533, 2208323; return to starting point.

(ii) NOTE: Map 10 follows:



(11) Hawaii 3—*Cyanea platyphylla*—a  
(1,403 ha, 3,467 ac)

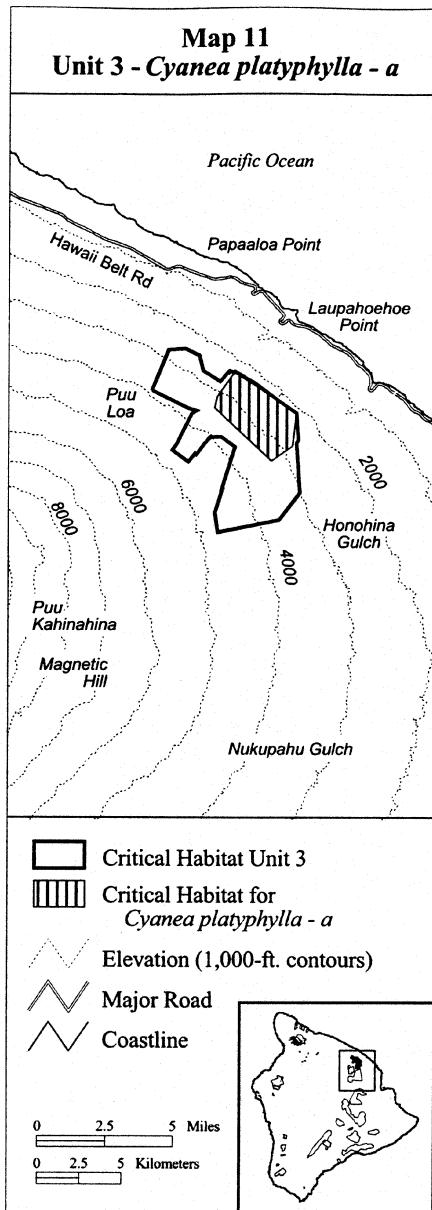
(i) Unit consists of the following eight boundary points: Start at 261936, 2208604; 263321, 2207740; 265617, 2206104; 265417, 2204172; 264174, 2203283; 260750,

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2206482; 260875, 2207122; 261952, 2208637;  
return to starting point.

(ii) NOTE: Map 11 follows:



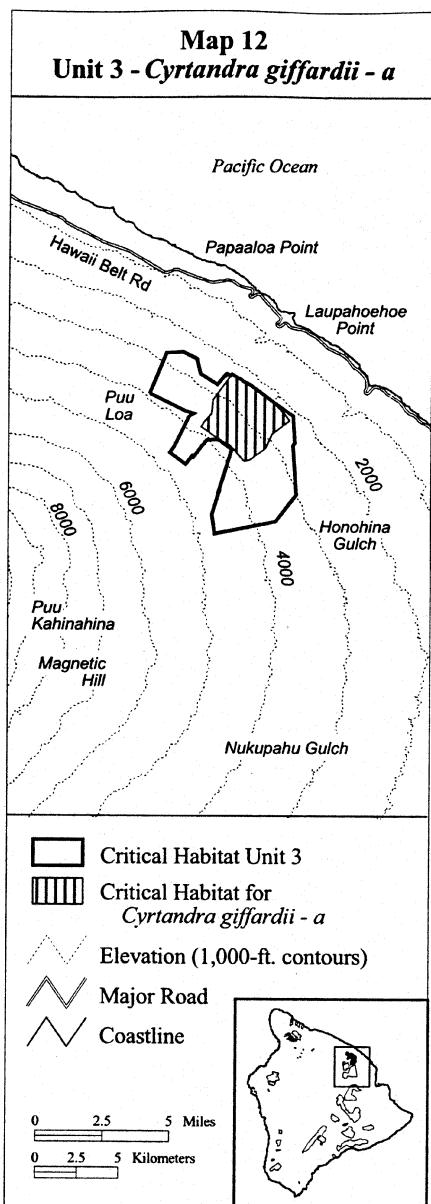
(12) Hawaii 3—*Cyrtandra giffardii*—a  
(1,510 ha, 3,731 ac)

(i) Unit consists of the following 22 boundary points: Start at 263977, 2204191; 263091, 2203511; 262736, 2203406; 261836, 2204431; 261358, 2204610; 261162, 2204774; 261114, 2204782; 260137, 2205484; 260269, 2205773; 260727, 2206307; 260808, 2207135; 261955, 2208667; 262335, 2208492; 262457, 2208405; 262682, 2208256; 262829, 2208171; 263062, 2208031; 264606, 2206914; 264702, 2206732; 265162, 2206251; 265443, 2205871; 264381, 2205051; return to starting point.

(ii) NOTE: Map 12 follows:

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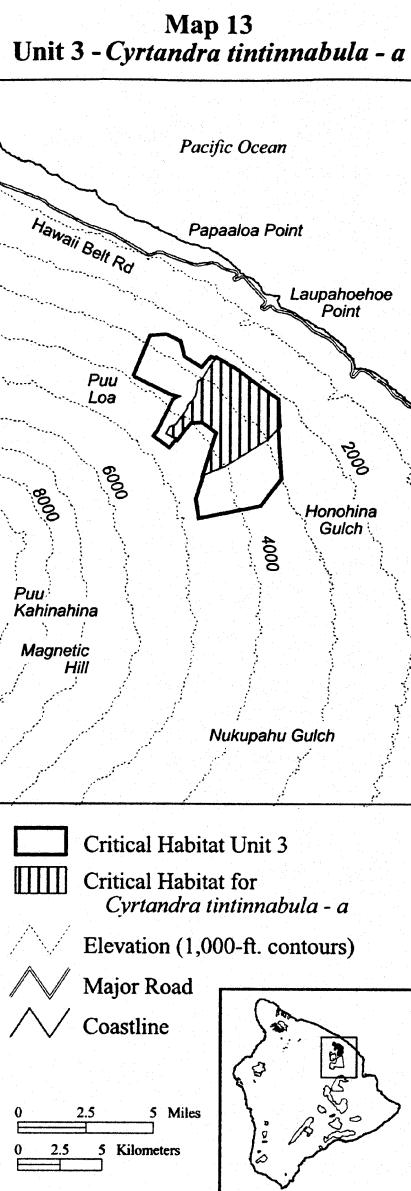


(13) Hawaii 3—*Cyrtandra tintinnabula*—a  
(2,322 ha, 5,738 ac)

(i) Unit consists of the following 30 boundary points: Start at 261996, 2208648; 262049, 2208624; 263522, 2207698; 265651, 2206158; 265754, 2204527; 265122,

2203759; 262570, 2202152; 261169, 2201554; 261944, 2204127; 261158, 2204766; 260467, 2204723; 260185, 2204367; 260136, 2204327; 260129, 2204298; 259641, 2203682; 259436, 2203822; 258995, 2204073; 259216, 2204499; 259562, 2204625; 259924, 2205129; 260239, 2205570; 260255, 2205790; 260539, 2206042; 260743, 2206373; 260822, 2206782; 260854, 2207176; 261184, 2207475; 261515, 2208026; 261720, 2208326; 261972, 2208593; return to starting point.

(ii) NOTE: Map 13 follows:



(14) Hawaii 3—*Phyllostegia warshaweri*—  
a (2,471 ha, 6,105 ac)

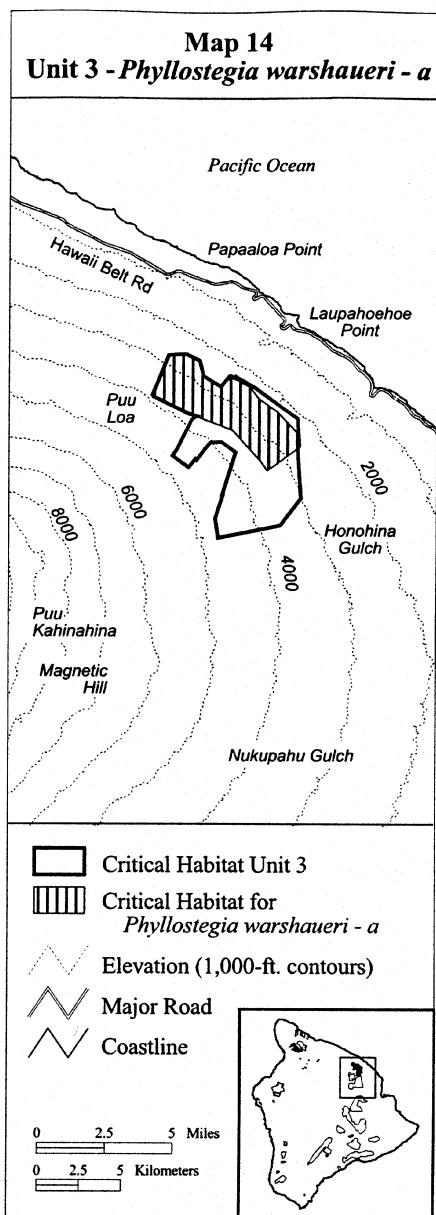
(i) Unit consists of the following 21 boundary points: Start at 257006, 2207522; 257019, 2207554; 257990, 2209960;

258969, 2210027; 258996, 2210030; 259000, 2210028; 259841, 2209621; 260070, 2208710; 261086, 2208085; 261545, 2208642; 262022, 2208476; 262839, 2208040; 263330, 2207359; 264502, 2206514; 265710, 2205217; 265744, 2204501; 265526, 2204234; 263864, 2203016; 263466, 2203598; 261804, 2205478; 259132, 2206487; return to starting point.

(ii) NOTE: Map 14 follows:

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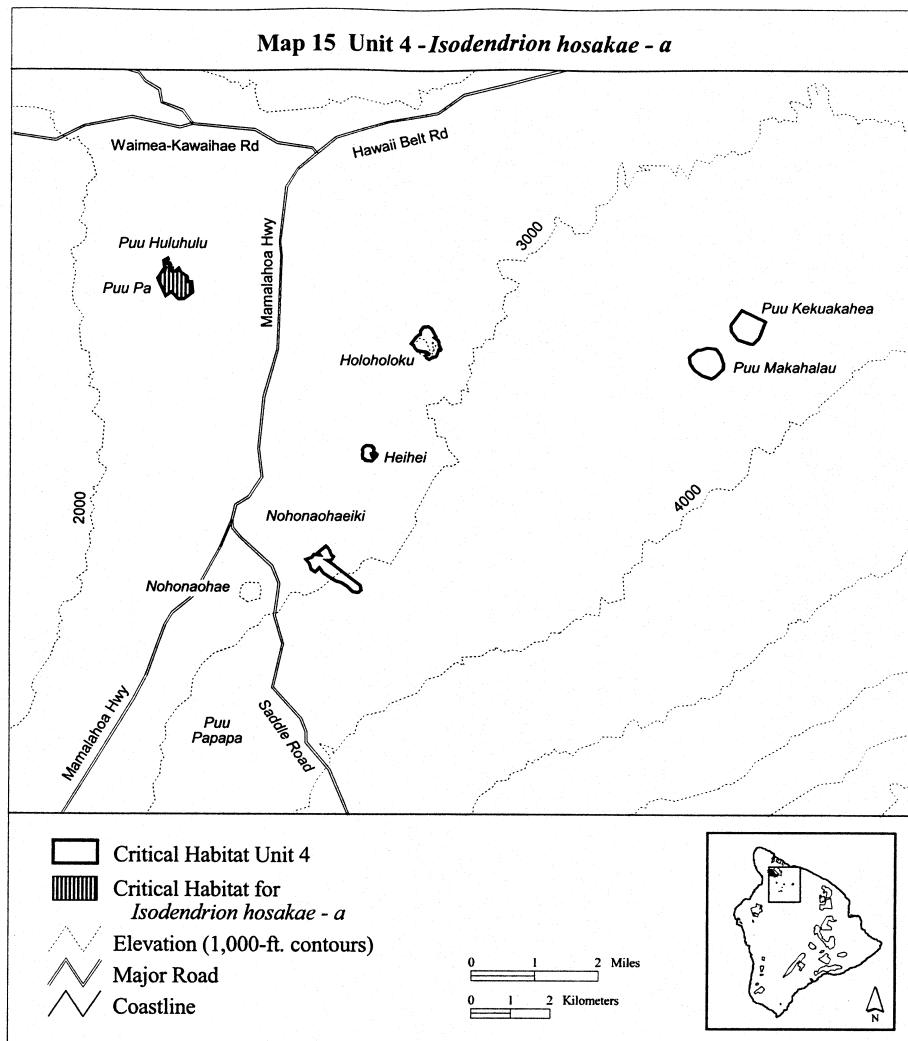
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(15) Hawaii 4—*Isodendrion hosakae*—a  
(49 ha, 121 ac)

(i) Unit consists of the following 30 boundary points: Start at 216918, 2213235; 217016, 2213305; 217029, 2213274; 217005, 2213247; 217021, 2213158; 217073, 2213172; 217095, 2213120; 217071, 2213088; 217094, 2213045; 217129, 2213041; 217128, 2212977; 217141, 2212945; 217161, 2212966; 217207, 2212974; 217303, 2213051; 217353, 2212944; 217455, 2212885; 217511, 2212825; 217544, 2212704; 217624, 2212704; 217658, 2212443; 217423, 2212270; 217284, 2212268; 217105, 2212451; 216974, 2212346; 216772, 2212797; 216900, 2213009; 216946, 2212994; 216966, 2213060; 216928, 2213088; return to starting point.

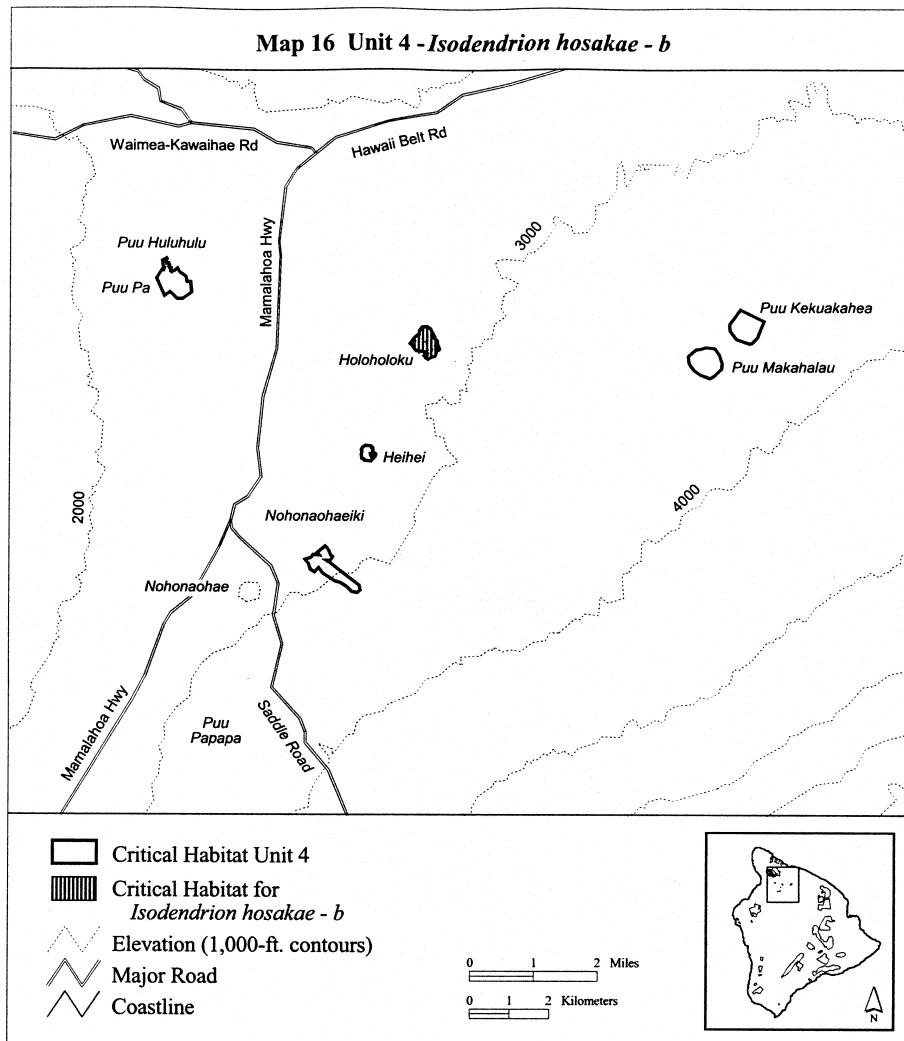
(ii) NOTE: Map 15 follows:



(16) Hawaii 4—*Isodendrion hosakae*—b  
(35 ha, 87 ac)

(i) Unit consists of the following 32 boundary points: Start at 223492, 2211567; 223608, 2211572; 223691, 2211528; 223727, 2211464; 223811, 2211316; 223763, 2211291; 223859, 2211232; 223887, 2211182; 223881, 2211116; 223938, 2211006; 223918, 2210977; 223876, 2210984; 223832, 2210851;

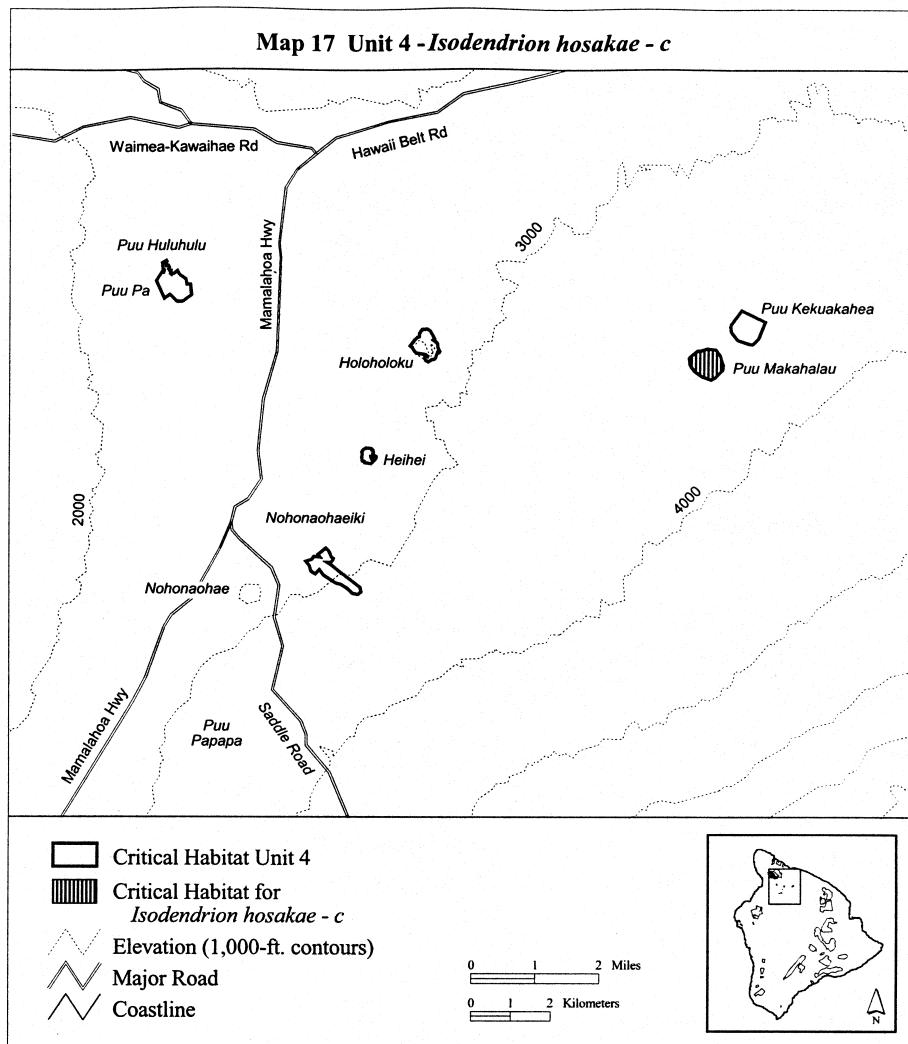
223809, 2210816; 223729, 2210799; 223636, 2210739; 223556, 2210796; 223552, 2210877; 223614, 2210869; 223630, 2210891; 223572, 2210924; 223506, 2210932; 223418, 2210946; 223338, 2210965; 223296, 2211003; 223244, 2211091; 223188, 2211145; 223294, 2211291; 223359, 2211352; 223406, 2211368; 223414, 2211415; 223415, 2211453; return to starting point.  
(ii) NOTE: Map 16 follows:



(17) Hawaii 4—*Isodendrion hosakae*—c  
(49 ha, 121 ac)

(i) Unit consists of the following 15 boundary points: Start at 230256, 2210857; 230438, 2210998; 230517, 2211001; 230682, 2211057; 230897, 2211021; 231011, 2210874; 231090, 2210642; 231078, 2210504; 230899, 2210322; 230783, 2210259; 230543, 2210360; 230357, 2210475; 230289, 2210576; 230244, 2210644; 230224, 2210817; return to starting point.

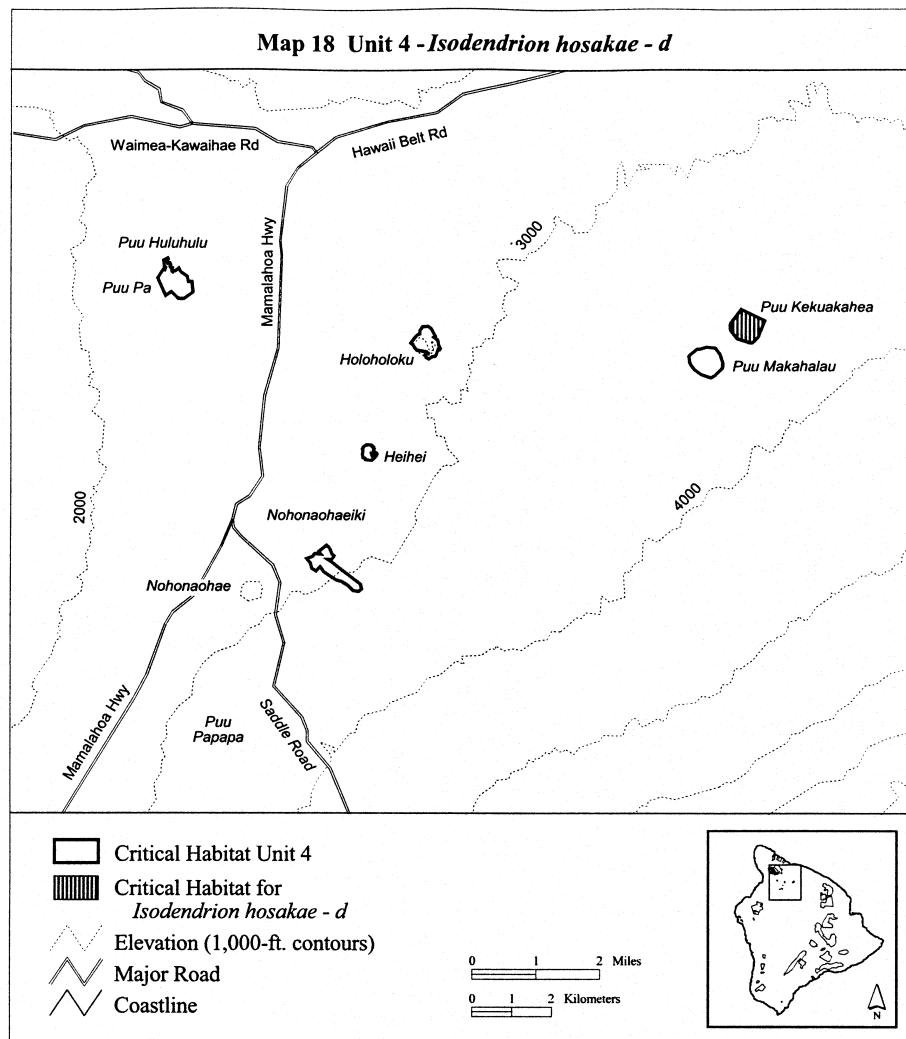
(ii) NOTE: Map 17 follows:



(18) Hawaii 4—*Isodendrion hosakae*—d  
(49 ha, 121 ac)

(i) Unit consists of the following nine boundary points: Start at 231266,

2211631; 231267, 2211631; 231537, 2212023; 232139, 2211722; 231979, 2211293; 231830, 2211149; 231774, 2211152; 231436, 2211271; 231277, 2211485; return to starting point.  
(ii) NOTE: Map 18 follows:

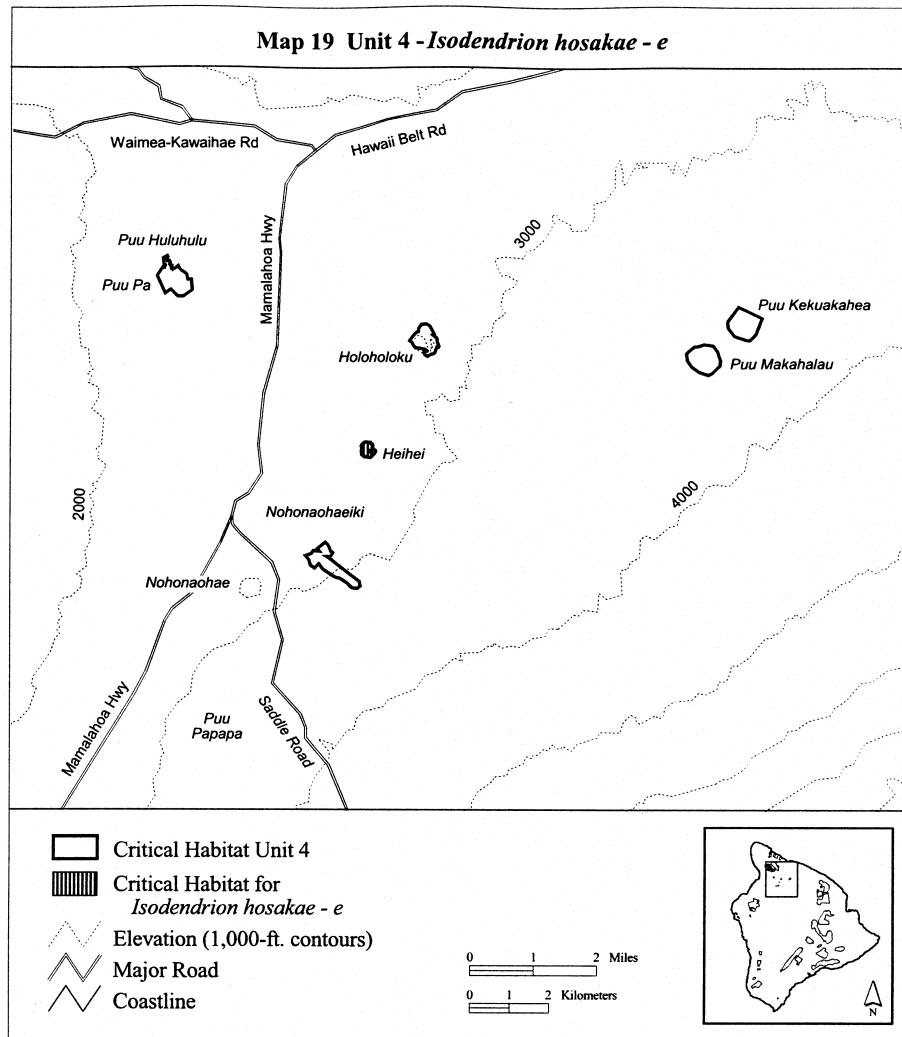


(19) Hawaii 4—*Isodendrion hosakae*—e  
(11 ha, 26 ac)

(i) Unit consists of the following 39 boundary points: Start at 222273, 2208478; 222265, 2208455; 222245, 2208415; 222245, 2208393; 222331, 2208332; 222330, 2208290; 222311, 2208248; 222279, 2208219; 222256, 2208215; 222254, 2208246; 222251, 2208259; 222230, 2208261; 222222, 2208286; 2208303; 222225, 2208306; 222227, 2208303; 222225, 2208306; 222227,

2208316; 222214, 2208320; 222209, 2208331; 222194, 2208337; 222189, 2208329; 222194, 2208324; 222202, 2208299; 222198, 2208283; 222219, 2208259; 222244, 2208216; 222238, 2208183; 222198, 2208149; 222045, 2208166; 222020, 2208212; 221971, 2208225; 221966, 2208306; 221969, 2208396; 221963, 2208440; 221988, 2208483; 222015, 2208509; 222077, 2208552; 222199, 2208535; 222218, 2208498; 222247, 2208498; return to starting point.

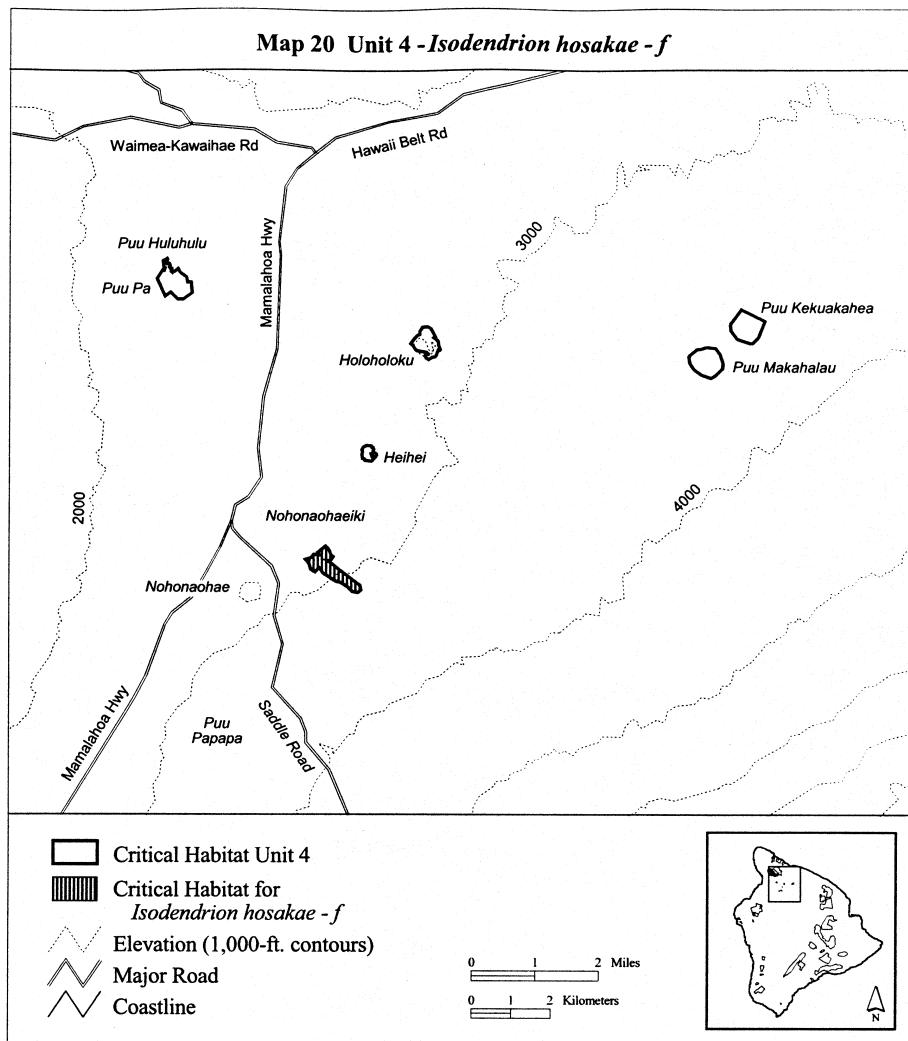
(ii) NOTE: Map 19 follows:



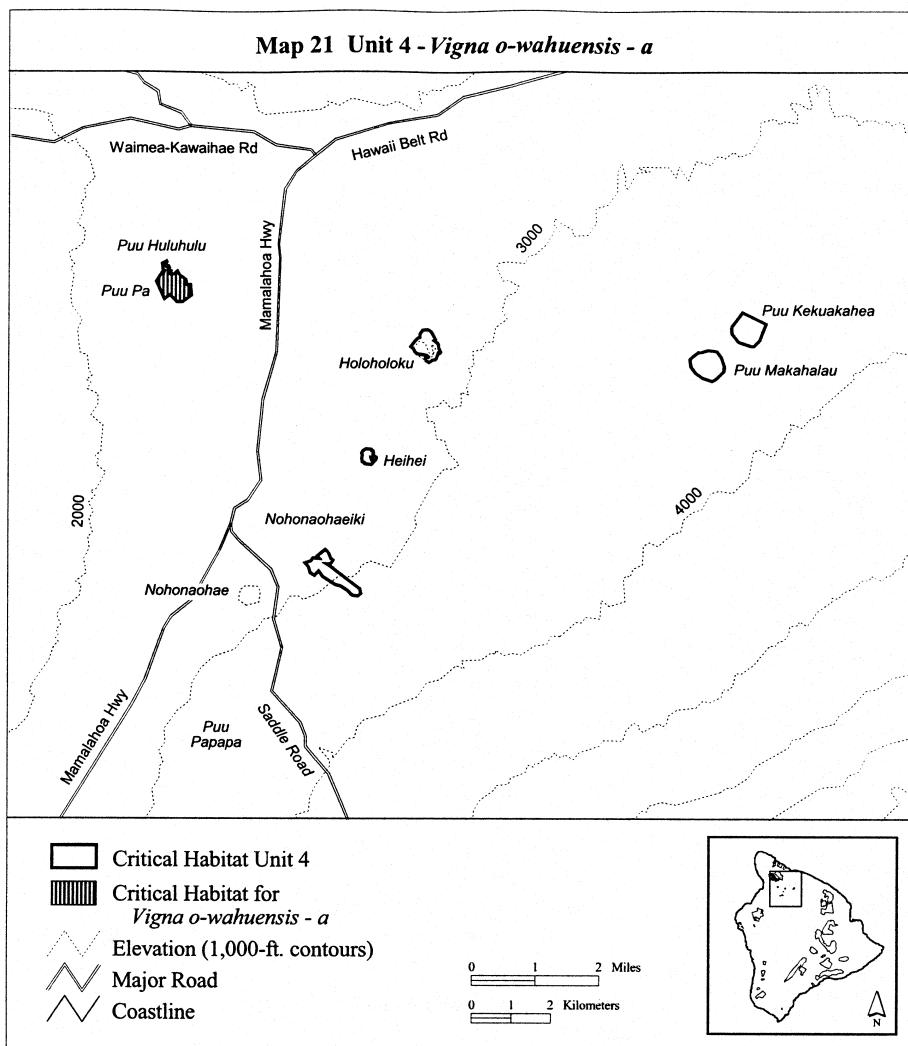
(20) Hawaii 4—*Isodendrion hosakae*—f (51 ha, 127 ac) 2205756; 220861, 2205816; 221058, 2205989; 221139, 2205911; 221195, 2205756; 221253,

(i) Unit consists of the following 27 boundary points: Start at 221456, 2205056; 221315, 2205089; 220996, 2205294; 220895, 2205435; 220799, 2205324; 220680, 2205394; 220645, 2205535; 220550, 2205636; 220701, 2205687; 220754, 2205770; 220904, 221737, 2204828; 221610, 2204957; return to starting point.

(ii) NOTE: Map 20 follows:



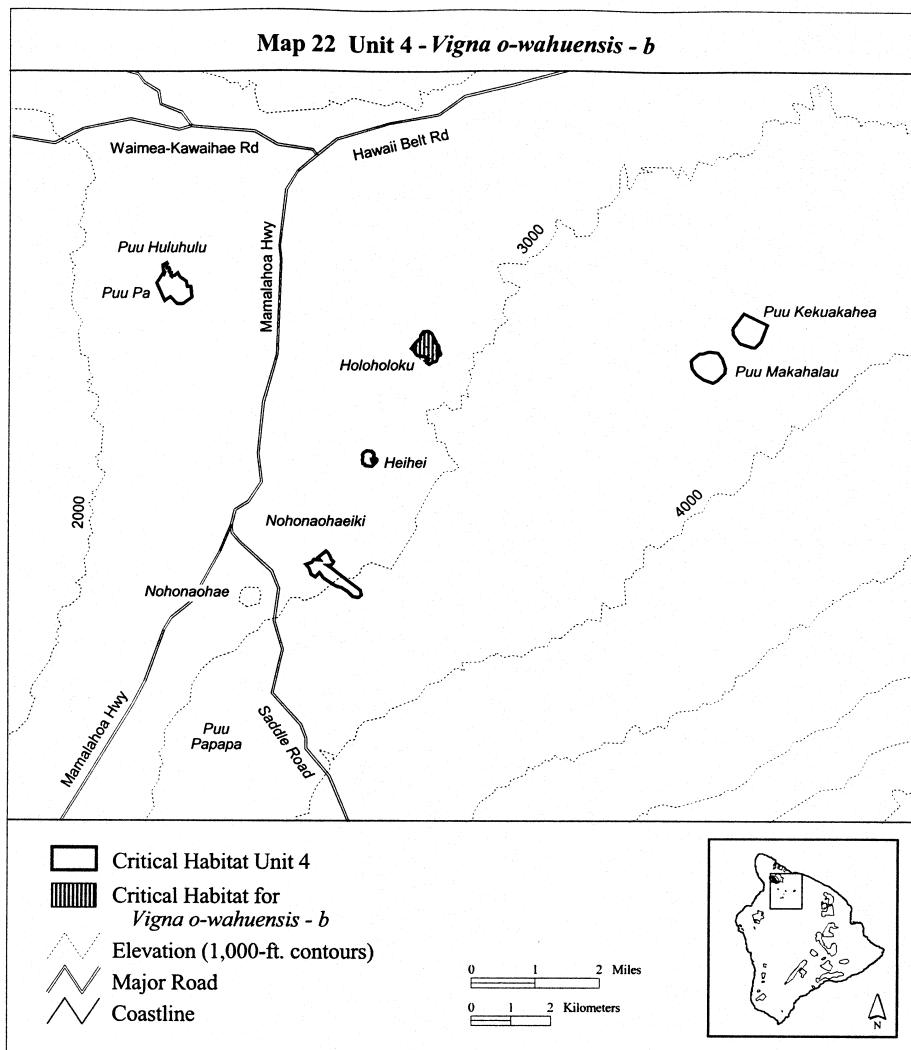
- (21) Hawaii 4—*Vigna o-wahuensis*—a (49 ha, 121 ac)
- (i) Unit consists of the following 30 boundary points: Start at 216918, 2213235; 217016, 2213305; 217029, 2213274; 217005, 2213247; 217021, 2213158; 217073, 2213172; 217095, 2213120; 217071, 2213088; 217094, 2213045; 217129, 2213041; 217123, 2212977; 217141, 2212945; 217161, 2212966; 217207, 2212974; 217303, 2213051; 217353, 2212944; 217455, 2212885; 217511, 2212825; 217544, 2212704; 217624, 2212704; 217658, 2212443; 217423, 2212270; 217284, 2212268; 217105, 2212451; 216974, 2212346; 216772, 2212797; 216900, 2213009; 216946, 2212994; 216966, 2213060; 216928, 2213088; return to starting point.
- (ii) NOTE: Map 21 follows:



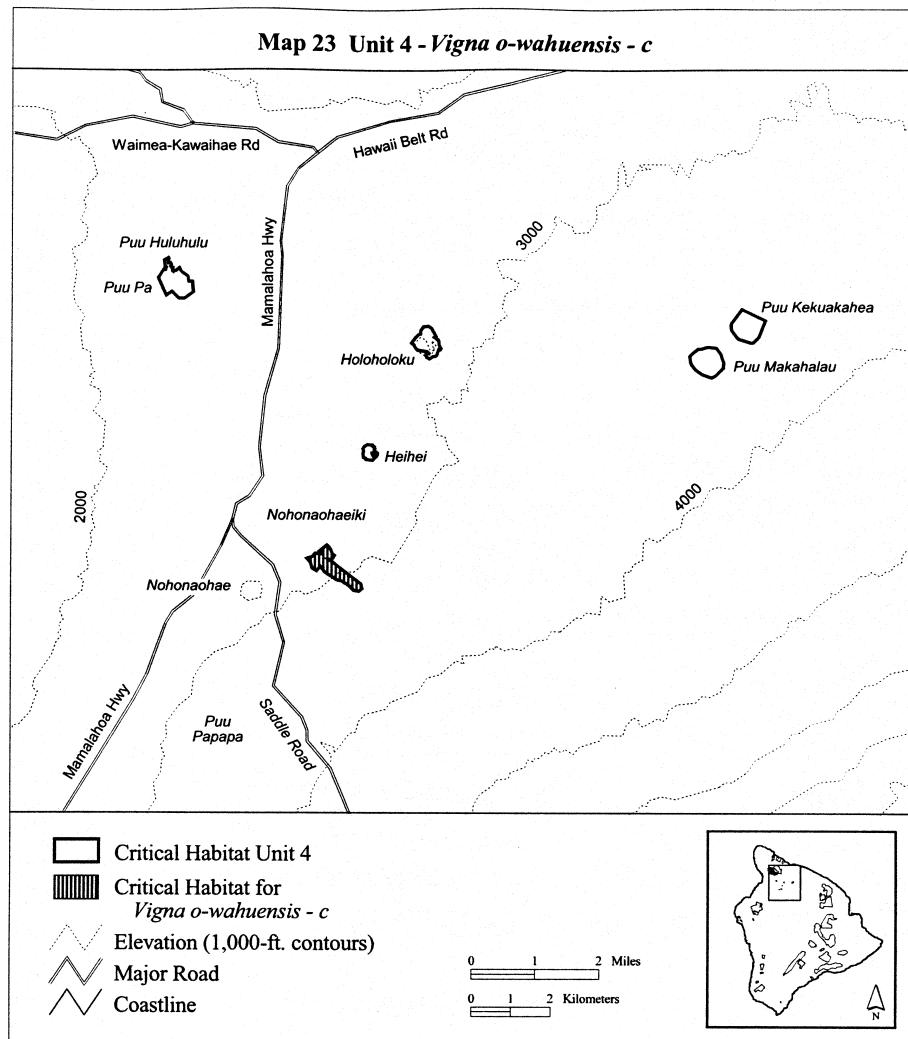
(22) Hawaii 4—*Vigna o-wahuensis*—b (35 ha, 87 ac)

(i) Unit consists of the following 32 boundary points: Start at 223492, 2211567; 223608, 2211572; 223691, 2211528; 223727, 2211464; 223811, 2211316; 223763, 2211291; 223859, 2211232; 223887, 2211182; 223881, 2211116; 223938, 2211006; 223918, 2210977; 223876, 2210984; 223832, 2210851; 223809, 2210816; 223729, 2210799; 223636, 2210739; 223556, 2210796; 223552, 2210877; 223614, 2210869; 223630, 2210891; 223572, 2210924; 223506, 2210932; 223418, 2210946; 223338, 2210965; 223296, 2211003; 223244, 2211091; 223188, 2211145; 223294, 2211291; 223359, 2211352; 223406, 2211368; 223414, 2211415; 223415, 2211453; return to starting point.

(ii) NOTE: Map 22 follows:



- (23) Hawaii 4—*Vigna o-wahuensis*—c (51 ha, 127 ac)
- (i) Unit consists of the following 27 boundary points: Start at 221456, 2205056; 221315, 2205089; 220996, 2205294; 220895, 2205435; 220799, 2205324; 220680, 2205394; 220645, 2205535; 220550, 2205636; 220701, 2205687; 220754, 2205770; 220904, 2205756; 220861, 2205816; 221058, 2205989; 221139, 2205911; 221195, 2205756; 221253, 2205717; 221216, 2205641; 221179, 2205613; 221095, 2205611; 221197, 2205553; 221326, 2205451; 221675, 2205188; 221929, 2204996; 221948, 2204869; 221871, 2204802; 221737, 2204828; 221610, 2204957; return to starting point.
- (ii) NOTE: Map 23 follows:



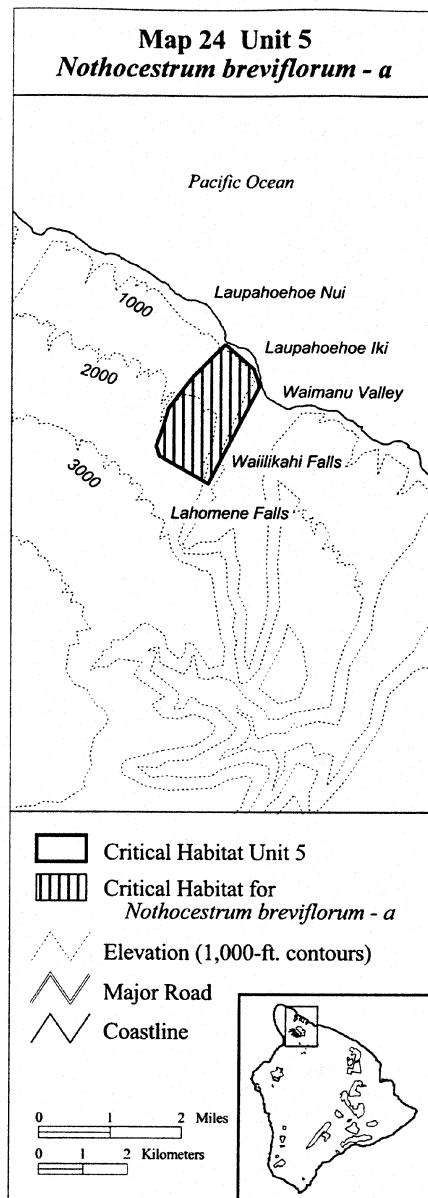
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(24) Hawaii 5—*Nothocestrum breviflorum*—a (403 ha, 995 ac)

(i) Unit consists of the following 10 boundary points: Start at 223325, 2230961; 223717, 2230611; 223961, 2230395; 224099, 223006; 222943, 2227775; 221847, 2228401; 221769, 2228638; 221914, 2229066; 222052, 2229490; 222606, 2230217; return to starting point.

(ii) NOTE: Map 24 follows:



(25) Hawaii 6—*Nothocestrum breviflorum*—b (1,113 ha, 2,750 ac)

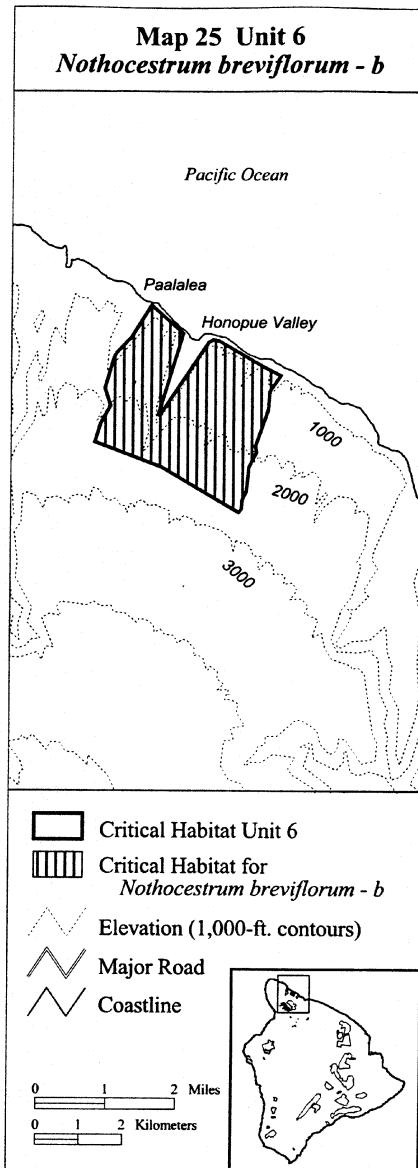
(i) Unit consists of the following 29 boundary points: Start at 217283, 2233128; 217629, 2233499; 218093, 2234242; 218828, 2233584; 218277, 2231773; 218266,

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2231685; 218291, 2231675; 219411, 2233375; 219521, 2233443; 219655, 2233414; 220288, 2233050; 220656, 2232834; 221080, 2232612; 220999, 2232500; 220822, 2232233; 220802, 2231818; 220498, 2230963; 220529, 2230813; 220350, 2230453; 220296, 2229915; 220205, 2229697; 220190, 2229504; 220122, 2229416; 218354, 2230452; 216792, 2231049; 216919, 2231470; 217150, 2231890; 217026, 2232314; 217214, 2232981; return to starting point.

(ii) NOTE: Map 25 follows:



(26) Hawaii 7—*Pleomele hawaiiensis*—a  
(677 ha, 1,673 ac)

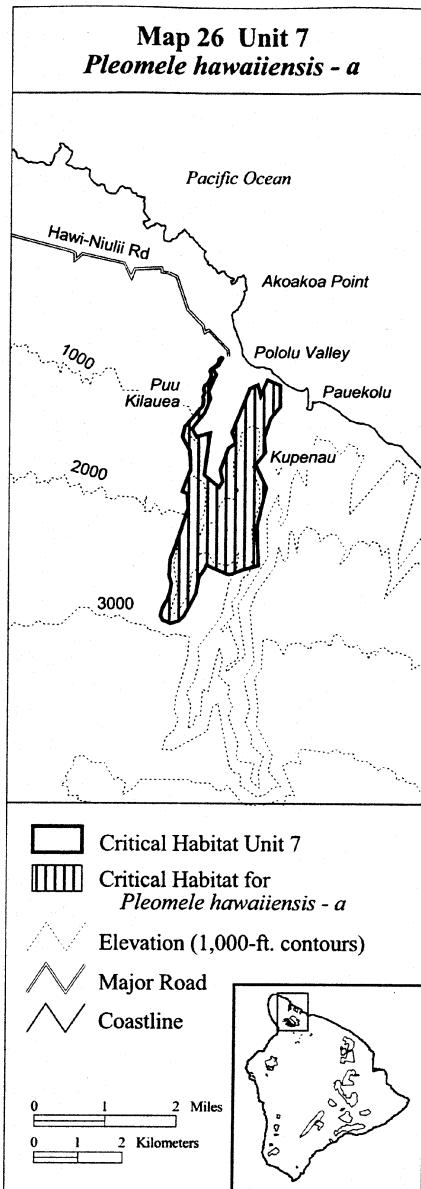
(i) Unit consists of the following 92 boundary points: Start at 213884, 2231521; 213842, 2231562; 213785, 2231427; 213666, 2231261; 213601, 2230893; 213453, 2230596; 213305, 2230350; 213204, 2230269;

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213030, 2230210; 212859, 2230290; 212807, 2230381; 212812, 2230467; 212835, 2230541; 212877, 2230637; 212939, 2230736; 213011, 2230905; 213041, 2231129; 212997, 2231275; 213007, 2231651; 213147, 2232011; 213409, 2232858; 213387, 2233177; 213269, 2233218; 213462, 2233730; 213453, 2233976; 213443, 2234090; 213442, 2234162; 213373, 2234284; 213315, 2234388; 213271, 2234480; 213320, 2234721; 213371, 2234760; 213429, 2234835; 213464, 2234878; 213513, 2234943; 213559, 2235003; 213642, 2235106; 213659, 2235121; 213685, 2235147; 213724, 2235205; 213745, 2235328; 213734, 2235407; 213765, 2235497; 213747, 2235588; 213771, 2235662; 213817, 2235706; 213849, 2235729; 213891, 2235850; 213906, 2235884; 213908, 2235940; 213886, 2235998; 213892, 2236033; 214009, 2236115; 214062, 2236170; 214080, 2236202; 214083, 2236227; 214091, 2236260; 214140, 2236304; 214165, 2236296; 214069, 2236123; 213954, 2236053; 214016, 2235921; 213862, 2235537; 213901, 2235357; 213770, 2235029; 213484, 2234675; 213587, 2234485; 213891, 2234567; 213773, 2233608; 214112, 2233331; 214183, 2233458; 214141, 2233713; 214320, 2234212; 214483, 2234338; 214390, 2234581; 214802, 2235593; 214978, 2235684; 215037, 2235434; 215190, 2235808; 215483, 2235675; 215479, 2235179; 215269, 2234894; 215127, 2234463; 215158, 2234131; 214937, 2233848; 215182, 2233321; 214973, 2232427; 215018, 2231531; 214640, 2231432; 214495, 2231365; 214382, 2231329; 214332, 2231335; return to starting point.

(ii) NOTE: Map 26 follows:

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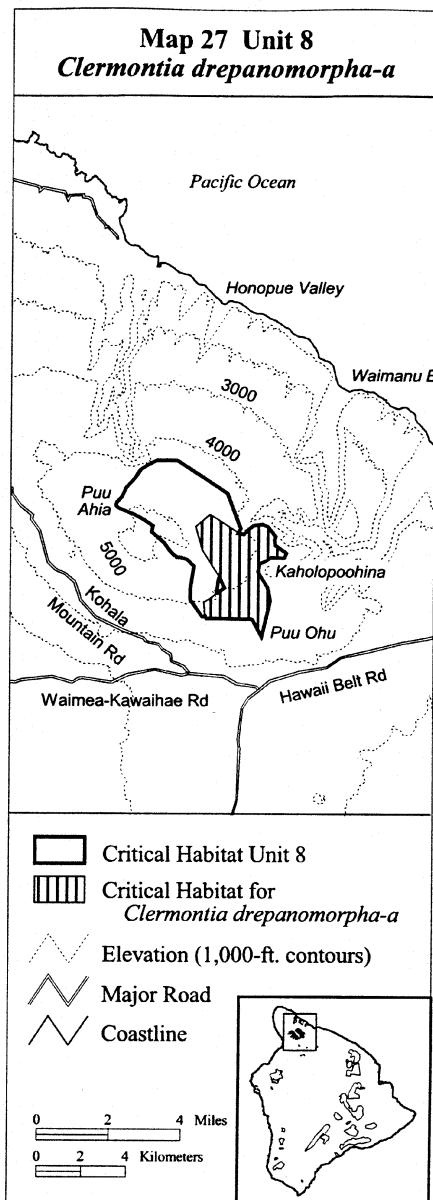


(27) Hawaii 8—*Clermontia drepanomorpha-a* (1,906 ha, 4,709 ac)

(i) Unit consists of the following 30 boundary points: Start at 214766, 2225082; 215176, 2225539; 215405, 2225905; 215716, 2226097; 216131, 2226318; 217035,

2226328; 218354, 2225470; 219286, 2224824; 219895, 2223228; 218899, 2220922; 218806, 2219907; 218769, 2219298; 218197, 2219271; 217672, 2220036; 217653, 2220562; 217819, 2221512; 217520, 2221821; 217378, 2221880; 217229, 2221937; 217063, 2221937; 216768, 2222158; 216463, 2222582; 215919, 2223071; 215956, 2223348; 215550, 2223643; 215070, 2223892; 214393, 2224156; 214299, 2224261; 214335, 2224407; 214570, 2224647; return to starting point.

(ii) NOTE: Map 27 follows:



(28) Hawaii 8—*Phyllostegia warshawerii*—b (1,177 ha, 2,908 ac)

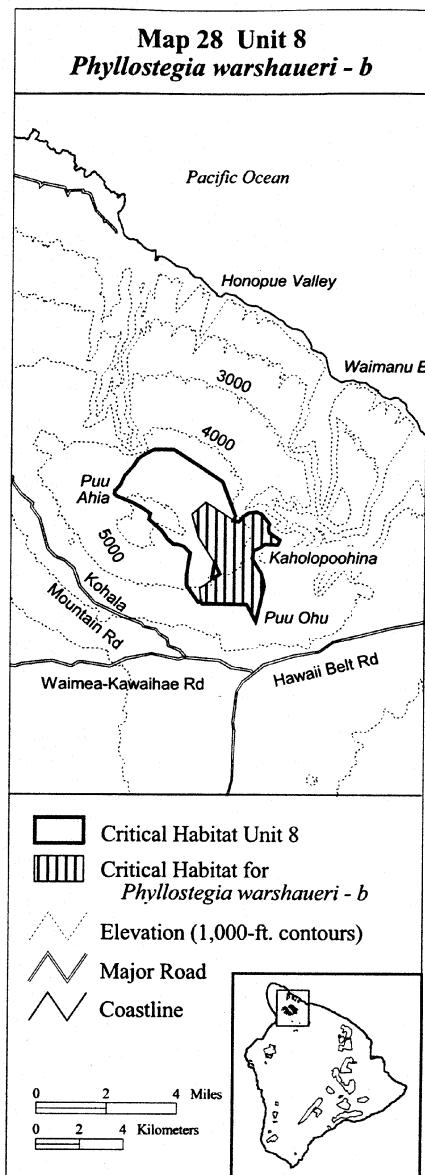
(i) Unit consists of the following 27 boundary points: Start at 218326, 2219182; 218265, 2219899; 218572, 2220103; 219186, 2220554; 218961, 2221066; 218183,

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2222274; 217900, 2223294; 218531, 2223871; 219842, 2223011; 220052, 2222981; 220255, 2223197; 220513, 2223371; 220883, 2223437; 221142, 2223301; 221469, 2222879; 221431, 2222712; 221443, 2222484; 221956, 2222124; 221860, 2221917; 221276, 2221939; 221020, 2221746; 220775, 2221645; 220679, 2221263; 221125, 2220585; 221255, 2220003; 220857, 2218373; 220445, 2219168; return to starting point.

(ii) NOTE: Map 28 follows:



(29) Hawaii 9—*Achyranthes mutica*—a (63 ha, 157 ac)

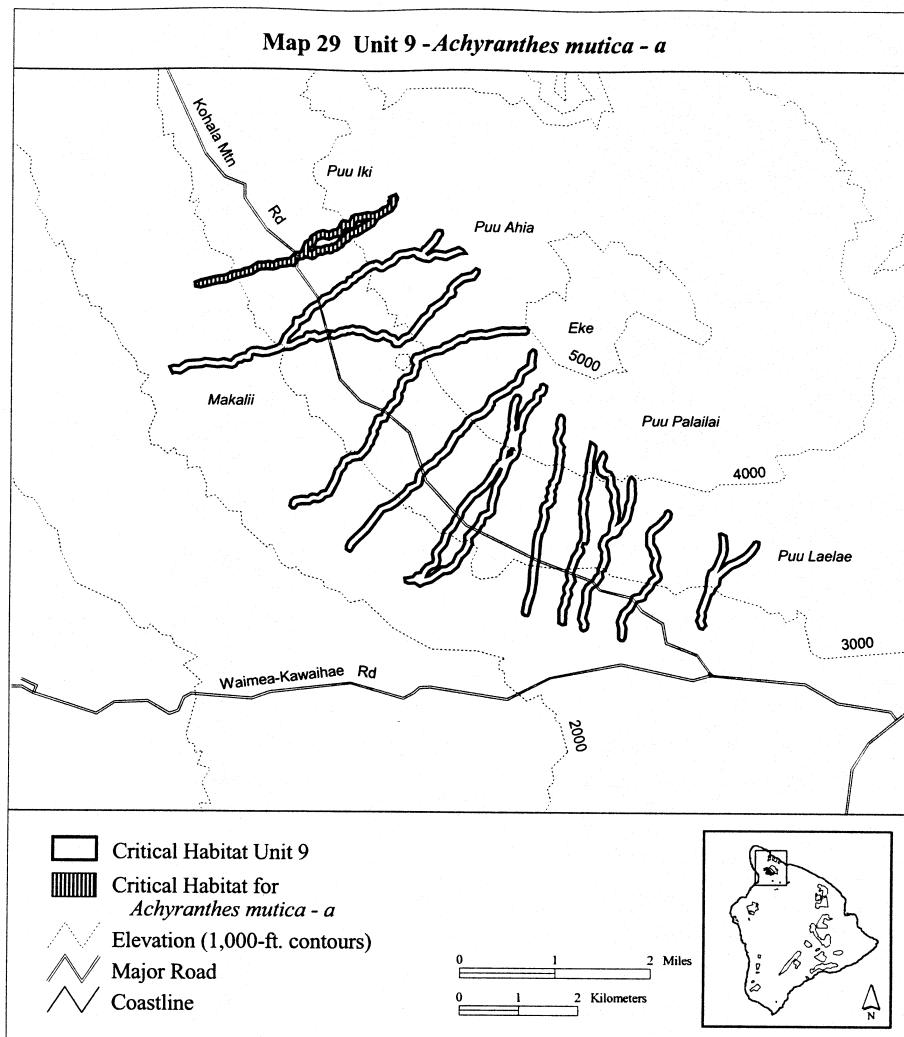
(i) Unit consists of the following 82 boundary points: Start at 211908, 2224450; 211840, 2224339; 211562, 2224160; 211477, 2224142; 211418, 2224067; 211356, 2224034; 211319, 2223969; 211271, 2223951;

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211220, 2223903; 211172, 2223900; 211144, 2223870; 211106, 2223860; 211053, 2223873; 210980, 2223837; 210916, 2223837; 210864, 2223788; 210802, 2223764; 210694, 2223796; 210650, 2223761; 210578, 2223756; 210489, 2223646; 210425, 2223652; 210359, 2223635; 210254, 2223626; 210218, 2223598; 210154, 2223584; 210056, 2223595; 209922, 2223585; 209805, 2223507; 209521, 2223432; 209365, 2223366; 209228, 2223347; 208930, 2223267; 208835, 2223286; 208830, 2223355; 208907, 2223389; 209205, 2223465; 209333, 2223482; 209483, 2223546; 209548, 2223555; 209606, 2223568; 209652, 2223593; 209761, 2223619; 209887, 2223699; 209956, 2223703; 209996, 2223703; 210057, 2223716; 210148, 2223704; 210219, 2223742; 210431, 2223770; 210529, 2223870; 210603, 2223875; 210683, 2224047; 210751, 2224079; 210773, 2224145; 210846, 2224182; 210875, 2224212; 210992, 2224241; 211084, 2224220; 211131, 2224248; 211225, 2224269; 211290, 2224395; 211339, 2224415; 211428, 2224394; 211464, 2224477; 211515, 2224517; 211607, 2224525; 211733, 2224561; 211824, 2224547; 211926, 2224590; 211986, 2224640; 212066, 2224670; 212094, 2224717; 212088, 2224750; 212115, 2224806; 212108, 2224823; 212219, 2224872; 212243, 2224820; 212243, 2224778; 212216, 2224731; 212213, 2224684; 212160, 2224595; return to starting point.

(ii) Excluding one area bounded by the following 31 points (8 ha, 19 ac): Start at 211235, 2224062; 211172, 2224016; 211129, 2224012; 211093, 2223986; 211042, 2223992; 210945, 2223954; 210872, 2223952; 210792, 2223885; 210751, 2223908; 210770, 2223960; 210841, 2223994; 210870, 2224063; 210928, 2224102; 210992, 2224116; 211080, 2224094; 211174, 2224135; 211293, 2224156; 211335, 2224196; 211345, 2224253; 211373, 2224282; 211439, 2224272; 211501, 2224297; 211562, 2224404; 211619, 2224407; 211657, 2224425; 211731, 2224441; 211766, 2224436; 211506, 2224267; 211403, 2224240; 211340, 2224159; 211274, 2224128; return to starting point.

(iii) NOTE: Map 29 follows:



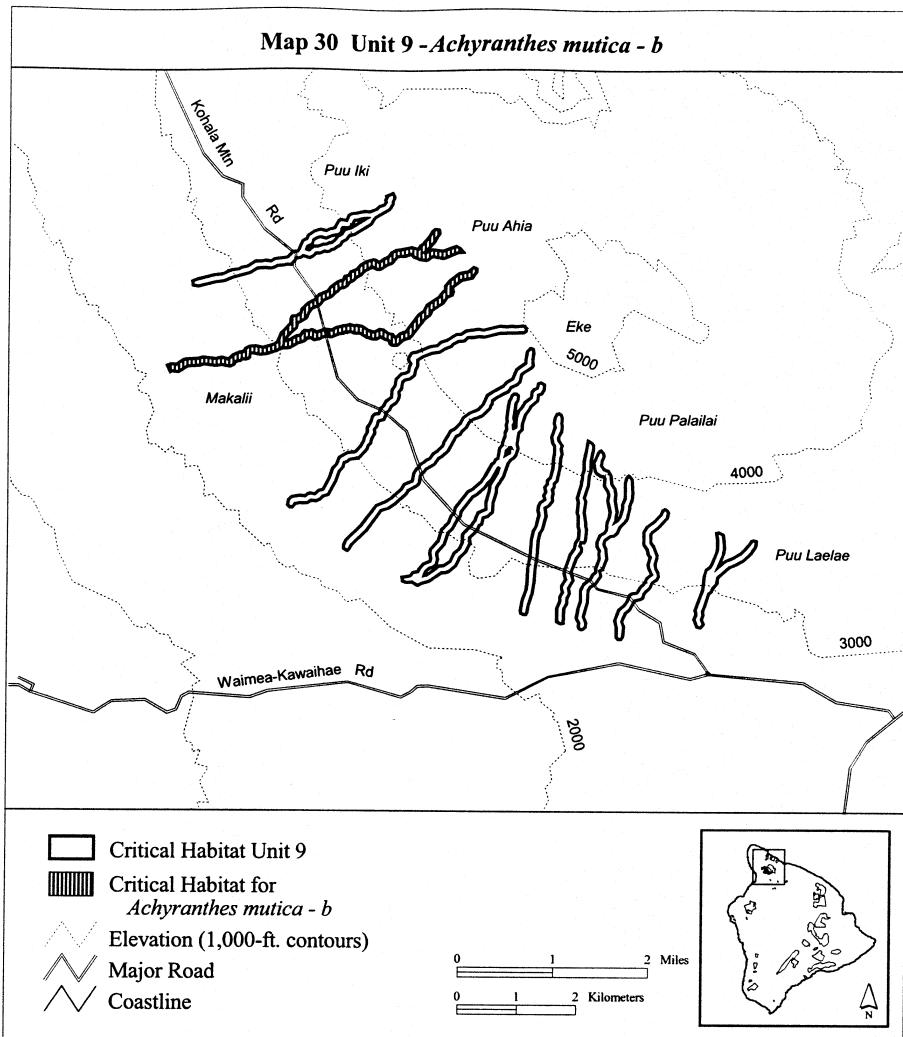
- (30) Hawaii 9—*Achyranthes mutica*—b  
(124 ha, 306 ac)
- (i) Unit consists of the following 211 boundary points: Start at 211305, 2223364; 211375, 2223384; 211403, 2223448; 211471, 2223464; 211508, 2223521; 211605, 2223565; 211667, 2223634; 211757, 2223690; 211885, 2223733; 211931, 2223724; 211986, 2223686; 212068, 2223746; 212139, 2223774; 212198, 2223854; 212277, 2223900; 212406, 2223912; 212539, 2223951; 212645, 2223915; 212681, 2223974; 212720, 2223994; 212836, 2224123; 212883, 2224222; 212935, 2224265; 213002, 2224253; 213015, 2224188; 212983, 2224154; 212926, 2224043; 212826, 2223931; 212746, 2223863; 212766, 2223847; 212819, 2223884; 212890, 2223915; 213075, 2223887; 213289, 2223971; 213371, 2223934; 213409, 2223871; 213316, 2223863; 213077, 2223764; 212894, 2223794; 212820, 2223740; 212780, 2223729; 212674, 2223741; 212626, 2223773; 212579, 2223781; 212533, 2223829; 212510, 2223825; 212439, 2223796; 212348, 2223795; 212294, 2223777; 212205, 2223673; 212125,

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2223641; 212013, 2223563; 211957, 2223565; 211888, 2223610; 211803, 2223577; 211717, 2223519; 211686, 2223470; 211593, 2223426; 211549, 2223371; 211491, 2223344; 211458, 2223292; 211397, 2223257; 211323, 2223241; 211283, 2223193; 211242, 2223171; 211187, 2223097; 211045, 2223037; 210978, 2222957; 210854, 2222894; 210790, 2222817; 210763, 2222740; 210607, 2222645; 210591, 2222566; 210546, 2222536; 210433, 2222414; 210413, 2222350; 210443, 2222344; 210571, 2222422; 210666, 2222448; 210691, 2222500; 210725, 2222521; 210793, 2222517; 210852, 2222539; 210905, 2222517; 210925, 2222488; 211073, 2222553; 211191, 2222530; 211279, 2222586; 211348, 2222589; 211378, 2222610; 211441, 2222613; 211494, 2222638; 211568, 2222607; 211619, 2222618; 211712, 2222598; 211828, 2222527; 211912, 2222500; 212003, 2222547; 212069, 2222542; 212147, 2222486; 212228, 2222467; 212274, 2222404; 212348, 2222471; 212448, 2222511; 212668, 2222802; 212761, 2222874; 212802, 2222963; 213012, 2223108; 213060, 2223184; 213115, 2223225; 213115, 2223296; 213180, 2223380; 213342, 2223505; 213502, 2223538; 213592, 2223617; 213636, 2223593; 213643, 2223539; 213565, 2223434; 213394, 2223394; 213253, 2223285; 213234, 2223260; 213253, 2223205; 213231, 2223147; 213152, 2223106; 213084, 2223011; 212891, 2222882; 212863, 2222805; 212756, 2222719; 212535, 2222428; 212497, 2222398; 212412, 2222369; 212308, 2222279; 212217, 2222281; 212186, 2222304; 212160, 2222365; 212097, 2222377; 212025, 2222427; 211944, 2222384; 211894, 2222380; 211782, 2222415; 211678, 2222482; 211644, 2222482; 211575, 2222486; 211508, 2222513; 211448, 2222492; 211413, 2222496; 211386, 2222474; 211328, 2222470; 211194, 2222417; 211089, 2222433; 210981, 2222380; 210899, 2222365; 210832, 2222399; 210774, 2222396; 210736, 2222348; 210624, 2222314; 210481, 2222229; 210331, 2222220; 210250, 2222177; 210082, 2222125; 209980, 2222118; 209833, 2222142; 209813, 2222131; 209804, 2222071; 209776, 2222040; 209729, 2222030; 209675, 2222040; 209640, 2222012; 209577, 2222003; 209527, 2221938; 209471, 2221916; 209325, 2221943; 209234, 2221919; 209020, 2221948; 208952, 2221925; 208760, 2221918; 208599, 2221816; 208492, 2221827; 208460, 2221817; 208410, 2221927; 208484, 2221948; 208565, 2221936; 208676, 2222014; 208732, 2222035; 208927, 2222043; 209015, 2222068; 209236, 2222040; 209325, 2222064; 209449, 2222035; 209526, 2222112; 209647, 2222157; 209695, 2222158; 209723, 2222210; 209793, 2222256; 209892, 2222262; 210029, 2222239; 210205, 2222289; 210267, 2222326; 210332, 2222479; 210486, 2222645; 210485, 2222700; 210505, 2222750; 210534, 2222771; 210592, 2222771; 210670, 2222819; 210675, 2222877; 210775, 2222984; 210911, 2223056; 210970, 2223132; 211117, 2223195; 211175, 2223273; return to starting point.

(ii) Excluding one area bounded by the following five points (<1 ha, <1 ac): Start at 211099, 2222496; 211109, 2222499; 211114, 2222499; 211118, 2222497; 211103, 2222479; return to starting point.

(iii) NOTE: Map 30 follows:

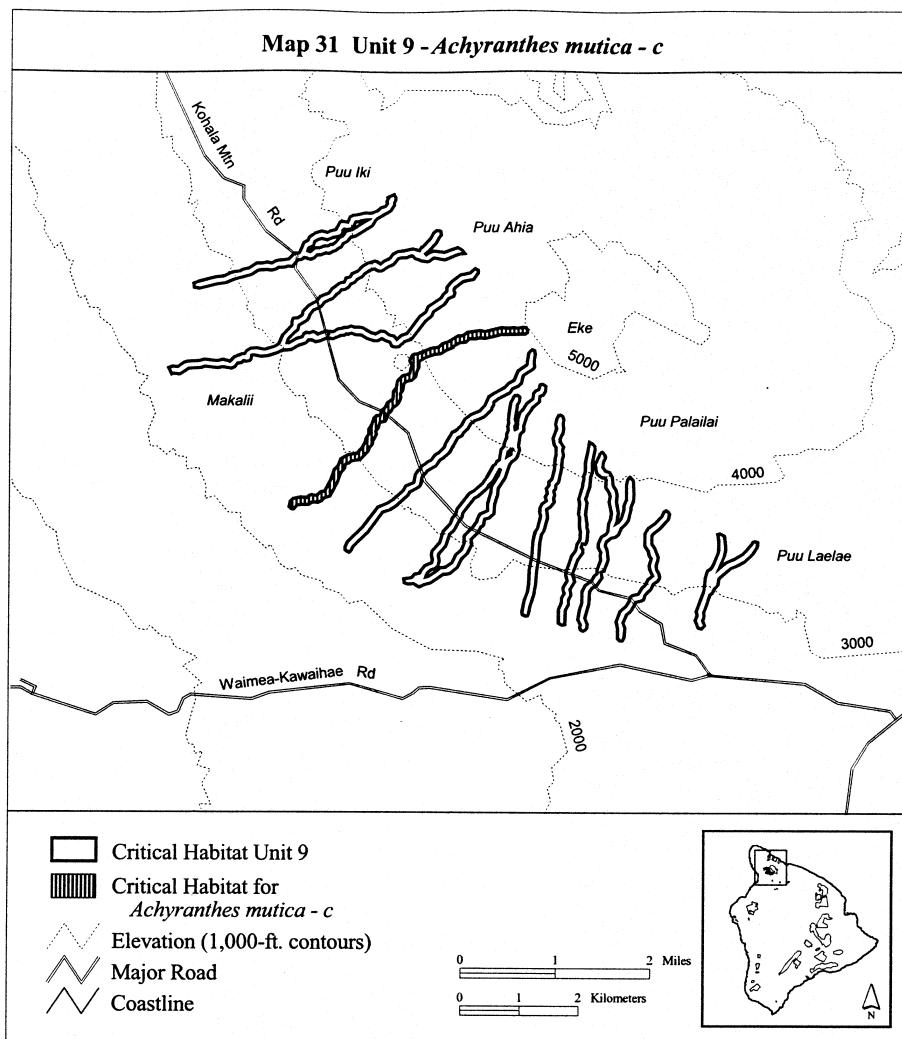


- (31) Hawaii 9—*Achyranthes mutica*—c (67 ha, 166 ac)
- (i) Unit consists of the following 114 boundary points: Start at 214447, 2222623; 214480, 2222585; 214474, 2222534; 214441, 2222505; 214055, 2222500; 213775, 2222429; 213683, 2222443; 213605, 2222423; 213500, 2222421; 213445, 2222367; 213339, 2222356; 213251, 2222303; 213225, 2222268; 213112, 2222232; 213029, 2222167; 212905, 2222150; 212752, 2222091; 212654, 2222033; 212657, 2221930; 212627, 2221876; 212610, 2221781; 212532, 2221714; 212449, 2221692; 212403, 2221653; 212384, 2221545; 212341, 2221489; 212348, 2221423; 212328, 2221349; 212298, 2221305; 212213, 2221243; 212181, 2221177; 212126, 2221131; 212117, 2221072; 212086, 2221019; 212000, 2220995; 211970, 2220899; 211930, 2220851; 211934, 2220790; 211874, 2220666; 211868, 2220609; 211830, 2220572; 211804, 2220499; 211669, 2220360; 211517, 2220331; 211480, 2220298; 211424, 2220284; 211404, 2220203; 211334, 2220125; 211281, 2219976; 211155, 2219728; 211059,

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2219692; 211026, 2219657; 210955, 2219623; 210865, 2219627; 210798, 2219584; 210675, 2219589; 210587, 2219571; 210551, 2219507; 210505, 2219505; 210465, 2219555; 210482, 2219632; 210532, 2219684; 210655, 2219709; 210771, 2219702; 210805, 2219739; 210843, 2219752; 210929, 2219741; 210992, 2219793; 211068, 2219818; 211172, 2220027; 211227, 2220180; 211295, 2220255; 211335, 2220366; 211461, 2220440; 211611, 2220468; 211703, 2220566; 211753, 2220665; 211761, 2220714; 211810, 2220794; 211811, 2220884; 211862, 2220954; 211895, 2221066; 211936, 2221107; 212003, 2221115; 212026, 2221204; 212080, 2221243; 212124, 2221326; 212220, 2221402; 212224, 2221522; 212274, 2221597; 212292, 2221705; 212388, 2221798; 212459, 2221812; 212503, 2221840; 212510, 2221905; 212540, 2221974; 212507, 2222024; 212501, 2222072; 212543, 2222144; 212583, 2222162; 212627, 2222158; 212872, 2222265; 212987, 2222280; 213048, 2222334; 213150, 2222369; 213305, 2222475; 213389, 2222475; 213467, 2222537; 213685, 2222564; 213761, 2222548; 214042, 2222616; 214157, 2222613; 214239, 2222618; 214319, 2222611; return to starting point.

(ii) NOTE: Map 31 follows:



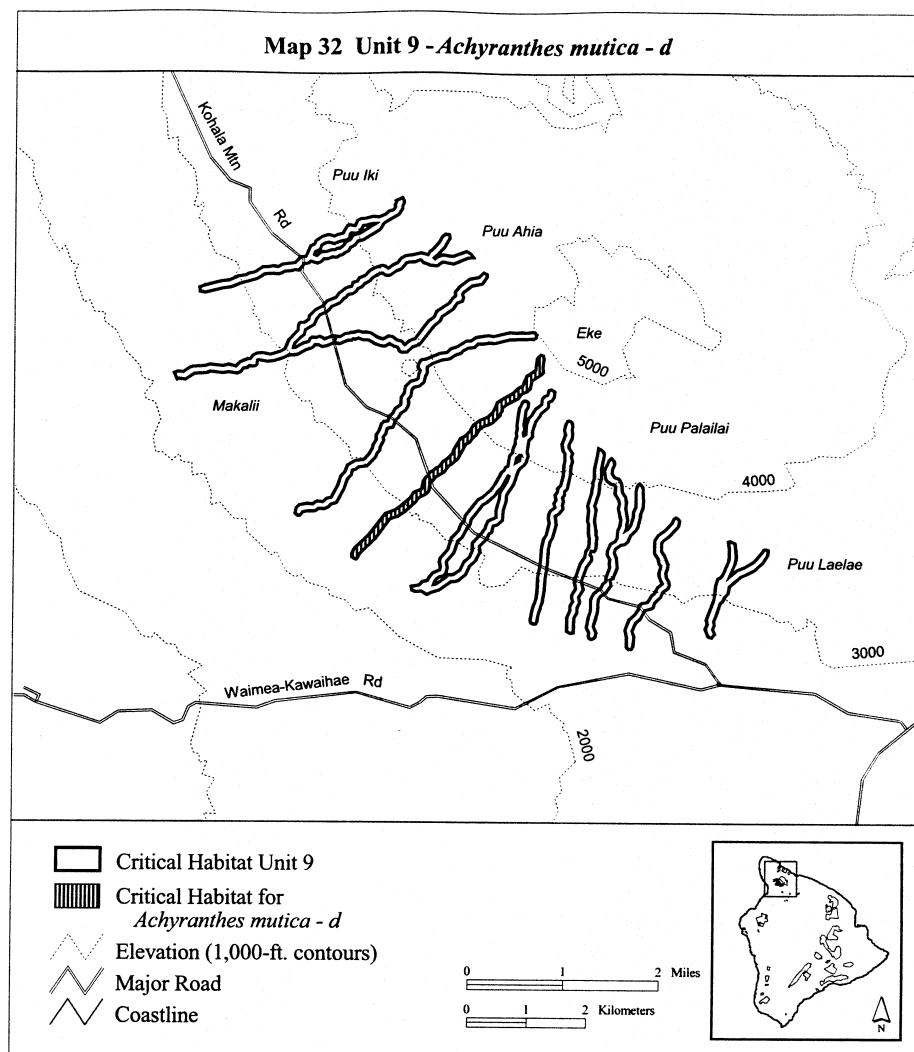
(32) Hawaii 9—*Achyranthes mutica*—d (58 ha, 143 ac) 2220393; 213022, 2220355; 212956, 2220257; 212808, 2220171; 212777, 2220117; 212741, 2220090; 212715, 2220056; 212695, 2219935; 212668, 2219888; 212516, 2219808; 212489, 2219754; 212288, 2219567; 212179, 2219502; 212052, 2219459; 211790, 2219103; 211552, 2218878; 211513, 2218800; 211486, 2218774; 211451, 2218791; 211424, 2218818; 211424, 2218878; 211459, 2218955; 211700, 2219183; 211969, 2219547; 212135, 2219614; 212226, 2219670; 212391, 2219825; 212443, 2219903; 212578, 2219968; 212603, 2220105; 212654,

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2220177; 212688, 2220198; 212709, 2220249; 212787, 2220293; 212824, 2220334; 212873, 2220352; 212940, 2220443; 213005, 2220484; 213090, 2220567; 213108, 2220631; 213225, 2220827; 213293, 2220862; 213379, 2220952; 213439, 2221062; 213540, 2221136; 213683, 2221191; 213768, 2221286; 213838, 2221437; 213939, 2221510; 214108, 2221602; 214163, 2221673; 214261, 2221717; 214322, 2221877; 214479, 2221995; 214474, 2222036; 214504, 2222187; 214564, 2222248; 214601, 2222232; 214615, 2222160; 214609, 2222121; 214595, 2222026; 214602, 2221949; 214578, 2221912; return to starting point.

(ii) NOTE: Map 32 follows:



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(33) Hawaii 9—*Achyranthes mutica*—e (96 ha, 238 ac)

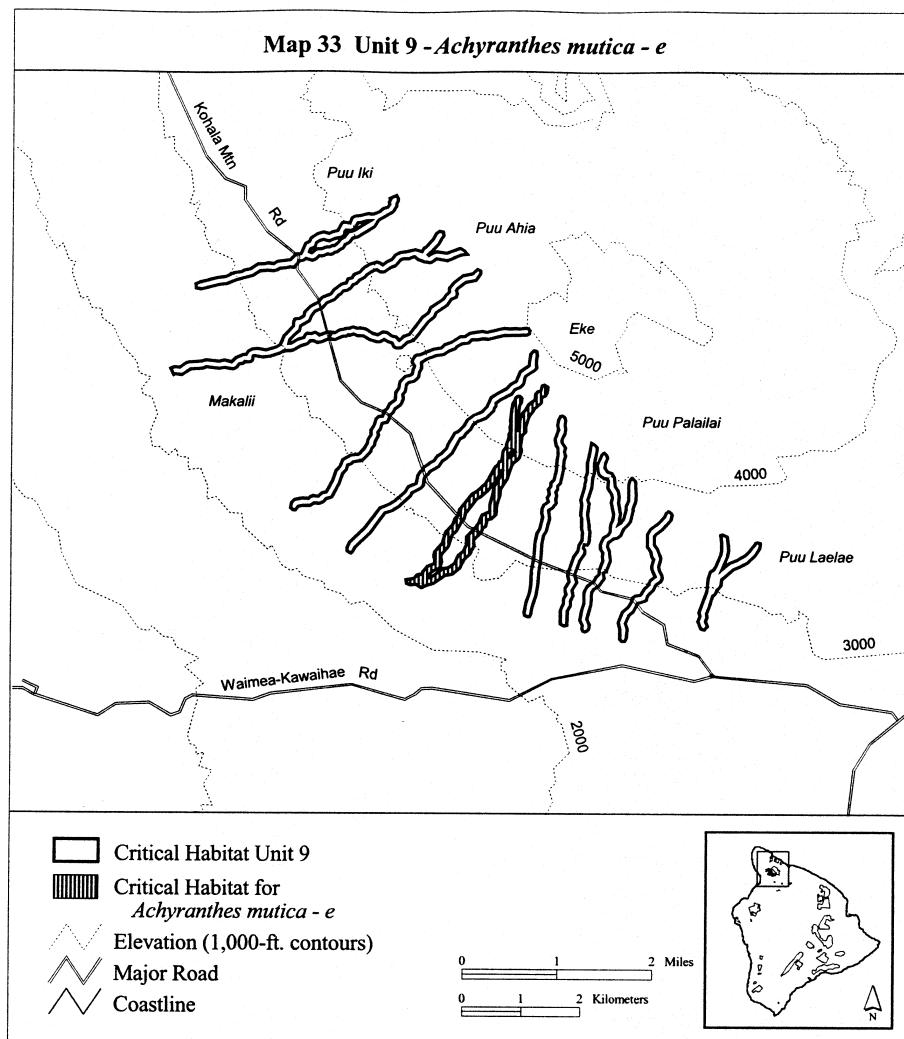
(i) Unit consists of the following 99 boundary points: Start at 214237, 2221396; 214246, 2221433; 214279, 2221468; 214325, 2221468; 214358, 2221436; 214355, 2221358; 214318, 2221305; 214305, 2221223; 214287, 2221049; 214300, 2220991; 214278, 2220930; 214286, 2220881; 214313, 2220902; 214322, 2221047; 214365, 2221179; 214410, 2221218; 214476, 2221333; 214576, 2221408; 214591, 2221498; 214624, 2221541; 214679, 2221569; 214698, 2221646; 214740, 2221664; 214796, 2221627; 214793, 2221531; 214759, 2221478; 214700, 2221448; 214690, 2221357; 214573, 2221258; 214555, 2221210; 214474, 2221113; 214430, 2220938; 214431, 2220859; 214371, 2220793; 214339, 2220598; 214356, 2220538; 214326, 2220426; 214294, 2220372; 214236, 2220332; 214188, 2220269; 214118, 2220061; 214005, 2219871; 213995, 2219762; 213945, 2219600; 213933, 2219438; 213852, 2219367; 213784, 2219348; 213756, 2219241; 213719, 2219214; 213680, 2219137; 213551, 2219003; 213560, 2218908; 213486, 2218751; 213396, 2218673; 213327, 2218524; 213204, 2218429; 213145, 2218404; 213092, 2218406; 212882, 2218263; 212764, 2218230; 212684, 2218191; 212589, 2218244; 212485, 2218242; 212425, 2218262; 212420, 2218327; 212558, 2218345; 212607, 2218406; 212693, 2218421; 212709, 2218465; 212774, 2218551; 212890, 2218603; 212903, 2218650; 212889, 2218747; 212904, 2218803; 213028, 2218949; 213082, 2219133; 213196, 2219265; 213245, 2219371; 213290, 2219423; 213311, 2219514; 213517, 2219786; 213597, 2219831; 213729, 2219948; 213812, 2220057; 213922, 2220266; 213959, 2220297; 213979, 2220340; 214024, 2220366; 214050, 2220531; 214097, 2220597; 214097, 2220637; 214143, 2220749; 214139, 2220807; 214167, 2220862; 214158, 2220933; 214175, 2221002; 214166, 2221051; 214187, 2221243; 214206, 2221349; return to starting point.

(ii) Excluding two areas:

(A) Bounded by the following seven points (1 ha, 1 ac): Start at 214223, 2220569; 214237, 2220545; 214219, 2220515; 214216, 2220461; 214146, 2220412; 214161, 2220500; 214199, 2220523; return to starting point.

(B) Bounded by the following 42 points (38 ha, 94 ac): Start at 214049, 2220213; 214008, 2220110; 213892, 2219916; 213877, 2219786; 213826, 2219614; 213823, 2219491; 213696, 2219433; 213663, 2219365; 213649, 2219307; 213619, 2219275; 213591, 2219218; 213434, 2219056; 213440, 2218923; 213385, 2218816; 213302, 2218748; 213232, 2218602; 213126, 2218523; 213033, 2218514; 212998, 2218479; 212834, 2218368; 212794, 2218356; 212809, 2218402; 212825, 2218431; 212855, 2218461; 212888, 2218485; 212953, 2218499; 212996, 2218545; 213022, 2218636; 213007, 2218725; 213013, 2218754; 213131, 2218887; 213194, 2219087; 213261, 2219149; 213346, 2219306; 213394, 2219361; 213412, 2219449; 213602, 2219700; 213668, 2219734; 213820, 2219870; 213852, 2219933; 213913, 2219992; 214024, 2220195; return to starting point.

(iii) NOTE: Map 33 follows:



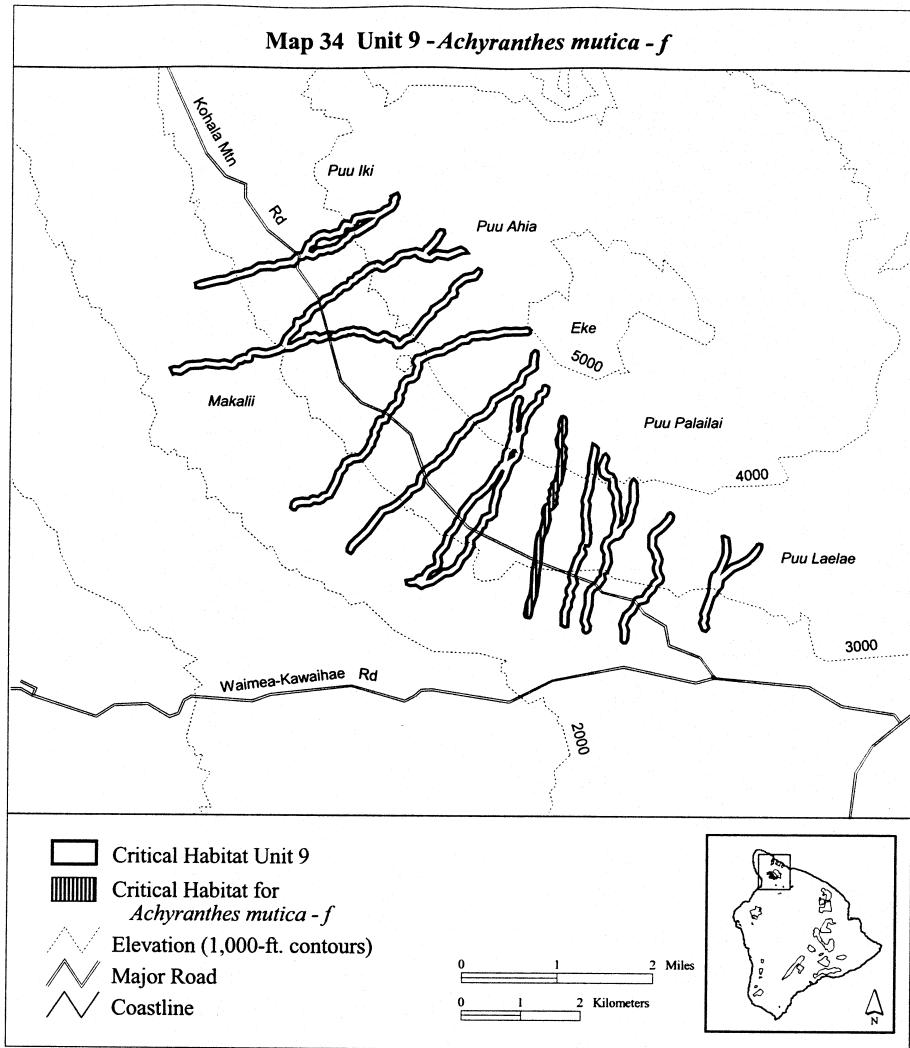
(34) Hawaii 9—*Achyranthes mutica*—f (43 ha, 105 ac) 2219637; 214883, 2219550; 214829, 2219519; 214843, 2219377; 214782, 2219151; 214741,

(i) Unit consists of the following 65 boundary points: Start at 215029, 2221141; 215078, 2221118; 215100, 2221081; 215105, 2221047; 215092, 2220971; 215106, 2220903; 215094, 2220834; 215046, 2220727; 215049, 2220676; 215102, 2220585; 215091, 2220525; 215103, 2220441; 215078, 2220357; 215072, 2220203; 215020, 2219976; 214978, 2219936; 214975, 2219872; 214947, 2219833; 214959, 2219766; 214941, 2219705; 214948, 2219637; 214883, 2219550; 214829, 2219519; 214843, 2219377; 214782, 2219151; 214741, 2219084; 214717, 2218965; 214700, 2218708; 214660, 2218467; 214650, 2218237; 214625, 2218082; 214553, 2217870; 214527, 2217739; 214511, 2217708; 214476, 2217702; 214431, 2217728; 214417, 2217776; 214449, 2217955; 214510, 2218118; 214530, 2218247; 214540, 2218479; 214581, 2218725; 214598, 2218985; 214627, 2219125; 214669, 2219193; 214725, 2219396; 214706, 2219465; 214712, 2219549; 214738, 2219603; 214819, 2219663; 214796,

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2219730; 214835, 2219788; 214819, 2219871; 2220626; 214924, 2220735; 214985, 2220898; 214858, 2219922; 214862, 2219981; 214908, 214972, 2220976; 214987, 2221070; return to 2220038; 214951, 2220206; 214958, 2220369; starting point.  
214981, 2220452; 214979, 2220577; 214947. (ii) NOTE: Map 34 follows:



(35) Hawaii 9—*Achyranthes mutica—g* (37 ha, 92 ac) 215595, 2220313; 215594, 2220146; 215573, 2220086; 215557, 2219909; 215486, 2219693; 215509, 2219626; 215490, 2219443; 215514, 2219279; 215507, 2219212; 215525, 2219154; 215513, 2218965; 215487, 2218921; 215439, 2218935; 215421, 2218871; 215447, 2218842;

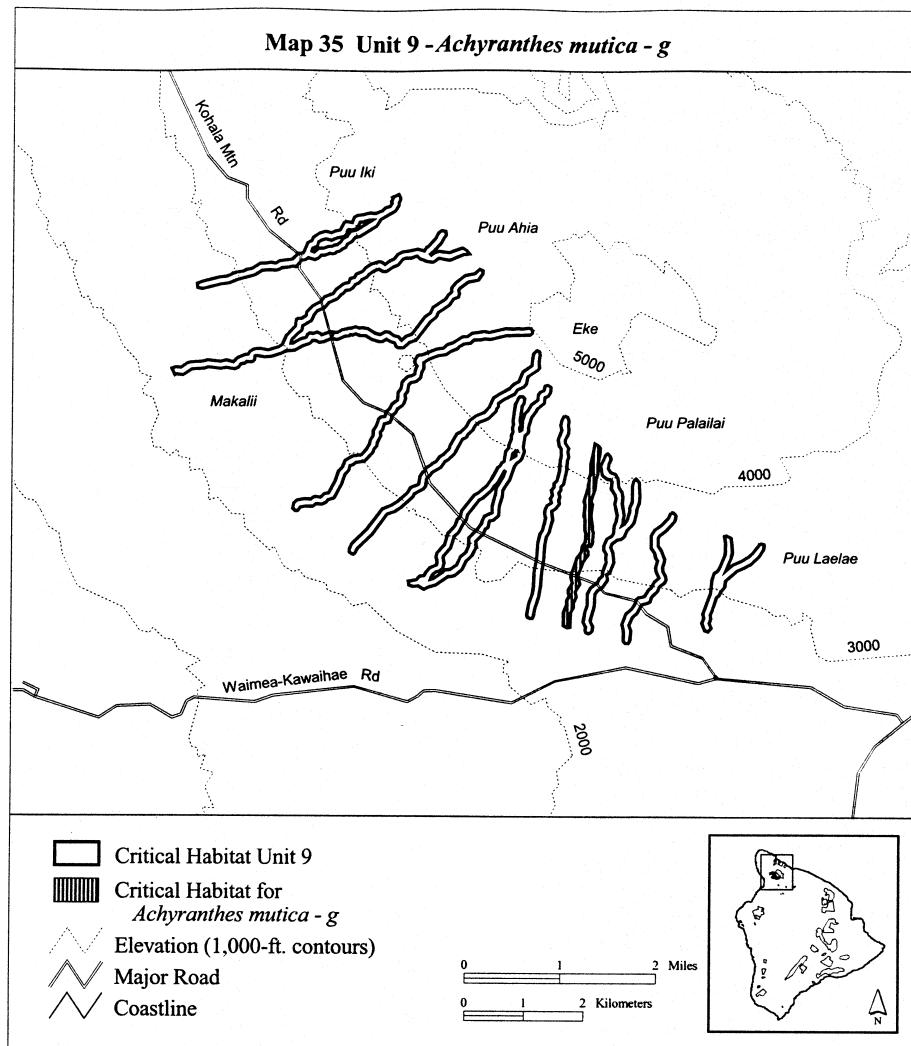
(i) Unit consists of the following 58 boundary points: Start at 215603, 2220632; 215636, 2220594; 215638, 2220532; 215595, 2220313; 215594, 2220146; 215573, 2220086; 215557, 2219909; 215486, 2219693; 215509, 2219626; 215490, 2219443; 215514, 2219279; 215507, 2219212; 215525, 2219154; 215513, 2218965; 215487, 2218921; 215439, 2218935; 215421, 2218871; 215447, 2218842;

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215441, 2218779; 215356, 2218664; 215275, 2218821; 215342, 2218926; 215394, 2219001; 2218426; 215304, 2218286; 215233, 2218154; 215403, 2219144; 215387, 2219204; 215383, 2219387; 215367, 2219431; 215388, 2219616; 215249, 2218060; 215206, 2217972; 215206, 215365, 2219699; 215438, 2219924; 215431, 2219963; 215454, 2220022; 215453, 2220094; 2217897; 215158, 2217810; 215145, 2217560; 215094, 2217556; 215038, 2217584; 215038, 2217818; 215090, 2217932; 215089, 2218007; 215131, 2218085; 215109, 2218142; 215112, 2218184; 215185, 2218304; 215155, 2218404; 215160, 2218458; 215247, 2218714; 215328, return to starting point.

(ii) NOTE: Map 35 follows:

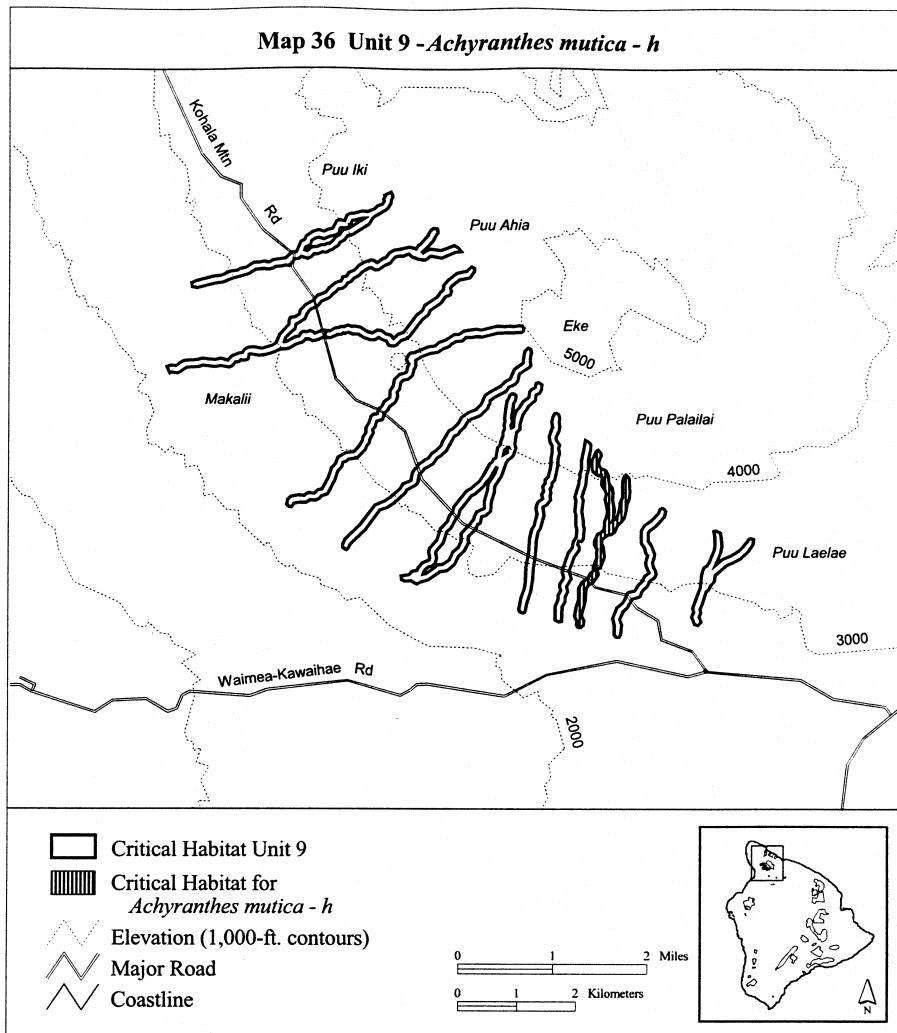


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(36) Hawaii 9—*Achyranthes mutica*—h  
(51 ha, 127 ac)

(i) Unit consists of the following 89 boundary points: Start at 215734, 2220485; 215765, 2220497; 215804, 2220452; 215818, 2220397; 215784, 2220322; 215772, 2220245; 215817, 2220179; 215889, 2220150; 215937, 2220077; 215955, 2219923; 215999, 2219846; 216021, 2219758; 216009, 2219647; 216048, 2219449; 216024, 2219367; 216031, 2219325; 216010, 2219282; 216053, 2219305; 216094, 2219364; 216137, 2219519; 216139, 2219583; 216177, 2219682; 216178, 2219953; 216194, 2220018; 216223, 2220058; 216259, 2220059; 216289, 2220016; 216301, 2219987; 216298, 2219945; 216308, 2219773; 216295, 2219664; 216254, 2219549; 216260, 2219498; 216212, 2219335; 216179, 2219277; 216099, 2219197; 216052, 2219098; 215990, 2219041; 215937, 2219032; 215843, 2218966; 215826, 2218898; 215861, 2218819; 215873, 2218650; 215805, 2218472; 215755, 2218447; 215775, 2218360; 215691, 2218233; 215604, 2218175; 215561, 2218121; 215555, 2217915; 215490, 2217671; 215528, 2217566; 215517, 2217489; 215481, 2217456; 215448, 2217452; 215415, 2217471; 215399, 2217507; 215407, 2217557; 215371, 2217647; 215391, 2217794; 215436, 2217930; 215438, 2218124; 215486, 2218223; 215604, 2218316; 215641, 2218385; 215687, 2218427; 215688, 2218503; 215752, 2218652; 215738, 2218734; 215745, 2218785; 215706, 2218864; 215704, 2218932; 215753, 2219051; 215835, 2219097; 215867, 2219146; 215875, 2219268; 215910, 2219348; 215926, 2219453; 215888, 2219641; 215902, 2219734; 215881, 2219806; 215827, 2219895; 215830, 2220023; 215804, 2220057; 215765, 2220062; 215684, 2220120; 215664, 2220161; 215649, 2220293; 215707, 2220428; return to starting point.

(ii) NOTE: Map 36 follows:



(37) Hawaii 9—*Achyranthes mutica*—i (31 ha, 76 ac)

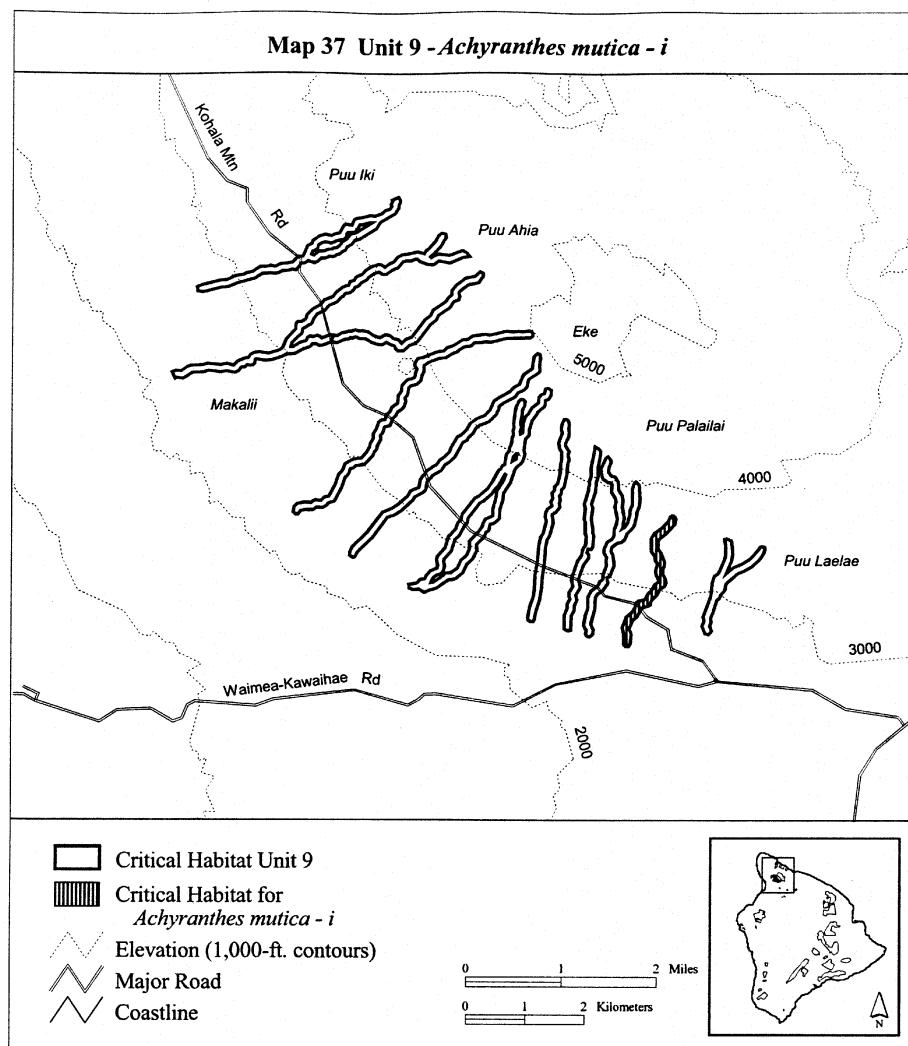
(i) Unit consists of the following 54 boundary points: Start at 216834; 2219498; 216868; 2219502; 216901; 2219476; 216916; 2219442; 216903; 2219353; 216759; 2219197; 216646; 2219111; 216624; 2219076; 216621; 2218932; 216675; 2218863; 216728; 2218712; 216725; 2218649; 216696; 2218569; 216704; 2218501; 216752; 2218421; 216755; 2218361; 216727; 2218309; 216657; 2218257; 216603; 2218151; 216551; 2218112; 216511; 2218060; 216492; 2217991; 216451; 2217967; 216352; 2217946; 216275; 2217799; 216194; 2217733; 216138; 2217593; 216168; 2217500; 216154; 2217339; 216130; 2217288; 216078; 2217289; 216046; 2217330; 216047; 2217501; 216017; 2217608; 216088; 2217792; 216177; 2217870; 216230; 2217941; 216264; 2218034; 216303; 2218058; 216396; 2218077; 216458; 2218191; 216514; 2218232; 216562; 2218330; 216635; 2218388; 216586; 2218499; 216576; 2218561; 216609; 2218685; 216581; 2218726; 216562; 2218818; 216503; 2218897; 216504;

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2219112; 216559, 2219201; 216683, 2219290;  
216791, 2219410; return to starting point.

(ii) NOTE: Map 37 follows:



(38) Hawaii 9—*Achyranthes mutica—j* (33 ha, 81 ac) 217956, 2218519; 217764, 2218345; 217745, 2218240; 217685, 2218167; 217657, 2218101; 217608, 2218068; 217537, 2217828; 217508,

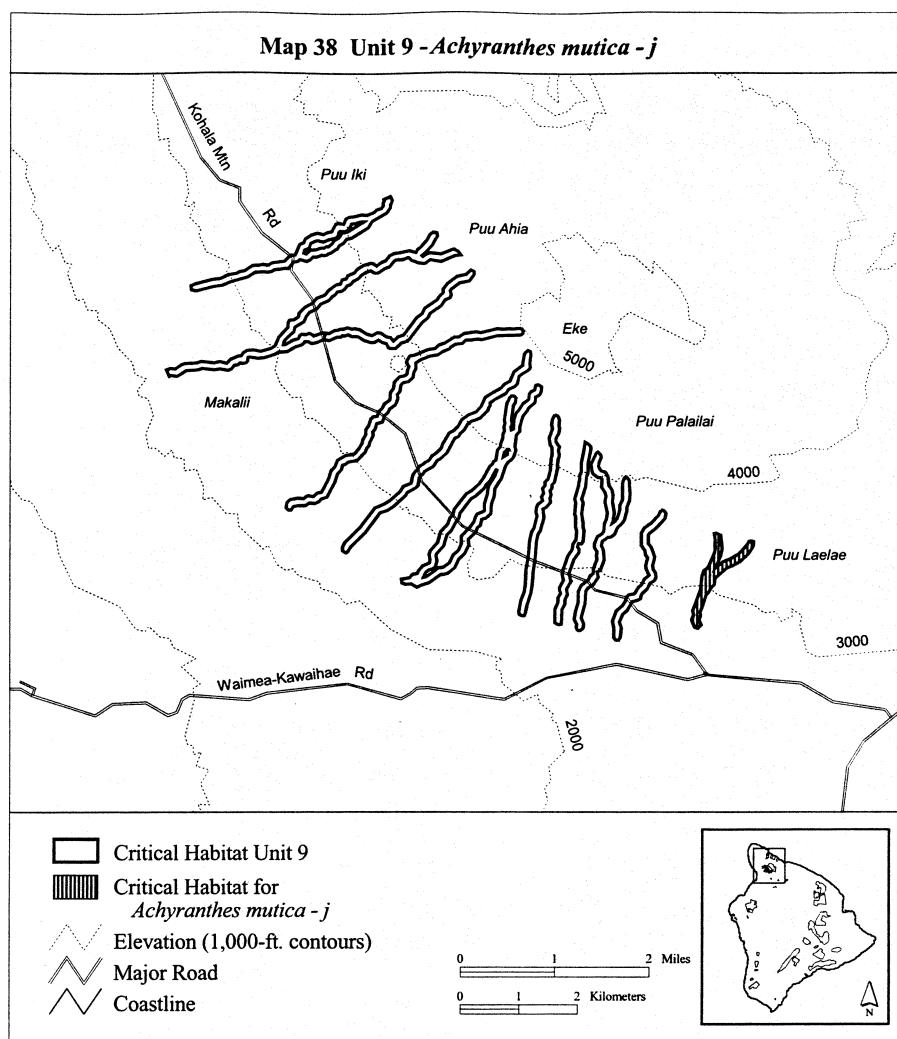
2217776; 217518, 2217705; 217495, 2217636; 217530, 2217550; 217478, 2217497; 217416, 2217507; 217370, 2217634; 217398, 2217718; 218411, 2218929; 218400, 2218875; 218323, 217386, 2217786; 217509, 2218141; 217535, 2218752; 218189, 2218630; 218079, 2218566; 2218373; 217570, 2218472; 217631, 2218518;

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217662, 2218576; 217748, 2218779; 217756, 2218840; 217758, 2218986; 217738, 2219099; 217771, 2219108; 217806, 2219095; 217846, 2219075; 217869, 2218958; 217876, 2218841; 217861, 2218736; 217768, 2218520; 217898, 2218624; 218030, 2218675; 218152, 2218753; 218233, 2218832; 218305, 2218922; return to starting point.

(ii) NOTE: Map 38 follows:



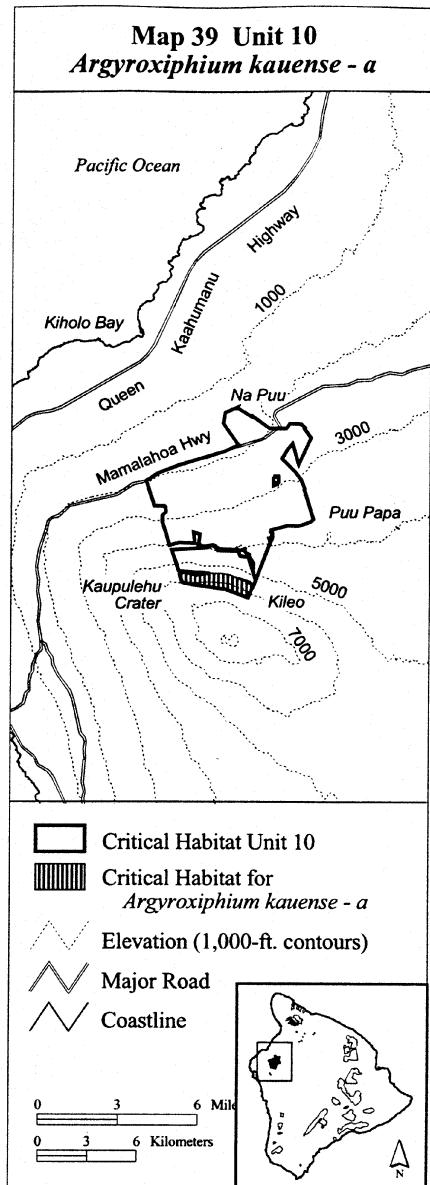
(39) Hawaii 10—*Argyroxiphium kauense*—a (349 ha, 861 ac) 197248, 2183609; 197370, 2183522; 197891, 2183644; 198395, 2183678; 198917, 2183661; 199421, 2183574; 199838, 2183400; 200064, 2183261; 200498, 2183174; 200689, 2183053; 200869, 2183009; 200548, 2182197; 199189,

(i) Unit consists of the following 22 boundary points: Start at 196364, 2183671; 196588, 2183730; 197040, 2183678;

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2182675; 199188, 2182675; 198920, 2182722; 197323, 2182971; 196589, 2183108; 196526, 2183207; 196397, 2183572; return to starting point.

(ii) NOTE: Map 39 follows:

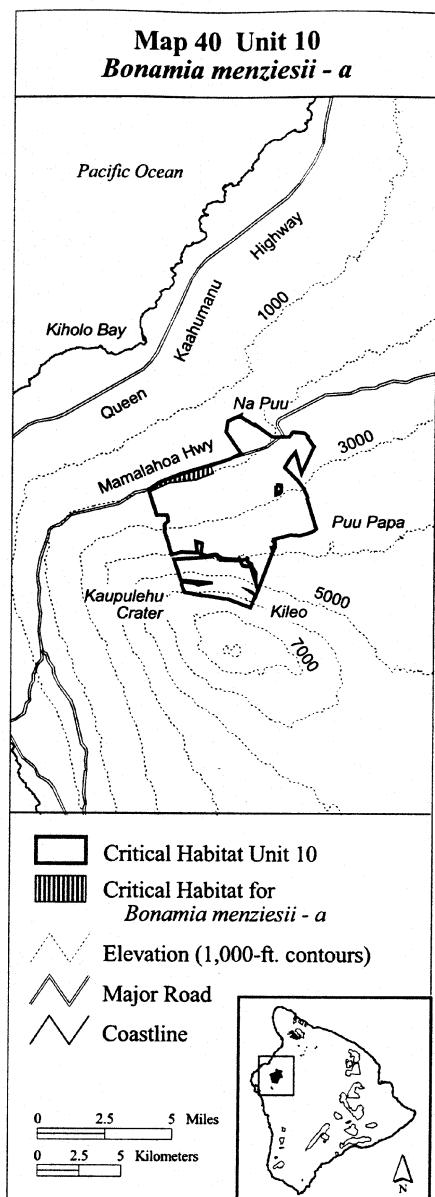


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(40) Hawaii 10—*Bonamia menziesii*—a (163 ha, 402 ac)

(i) Unit consists of the following 12 boundary points: Start at 194344, 2189312; 194345, 2189312; 195096, 2189814; 195763, 2190048; 196316, 2190285; 198038, 2190803; 198120, 2190635; 198240, 2190325; 197169, 2189897; 195603, 2189733; 194504, 2189243; 194375, 2189221; return to starting point.

(ii) NOTE: Map 40 follows:



2191445; 199462, 2192171; 199079, 2192786; 199311, 2193260; 199926, 2193724; 200763, 2193240; 201809, 2192548; 202245, 2192040; 202231, 2191144; 202231, 2190040; 202215, 2189832; 202071, 2189709; 200959, 2189699; 199966, 2189369; 199139, 2189093; 197714, 2188688; 196629, 2188284; 195353, 2187919; return to starting point.

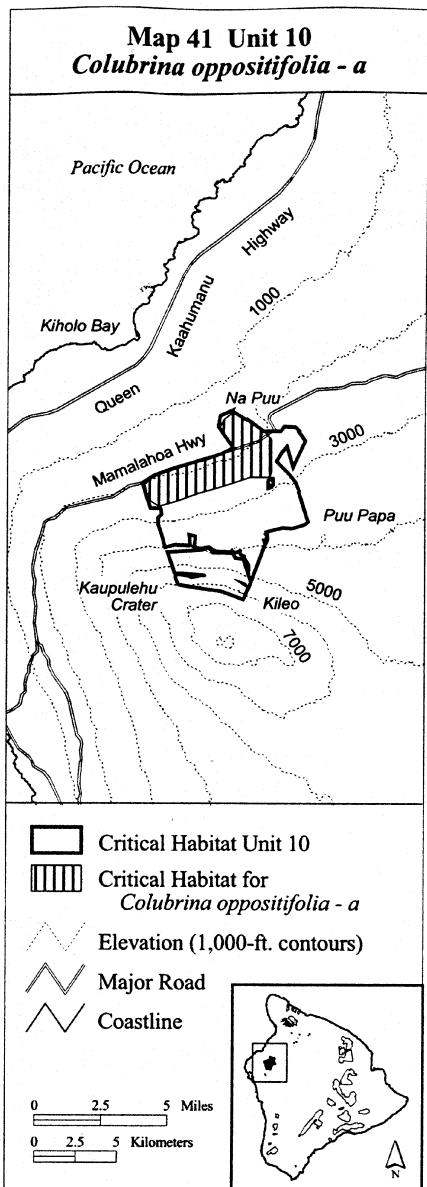
(ii) NOTE: Map 41 follows:

(41) Hawaii 10—*Colubrina oppositifolia*—a (1,918 ha, 4,740 ac)

(i) Unit consists of the following 23 boundary points: Start at 194733, 2188289; 194501, 2189318; 195028, 2189765; 196242, 2190221; 199593, 2191274; 200077,

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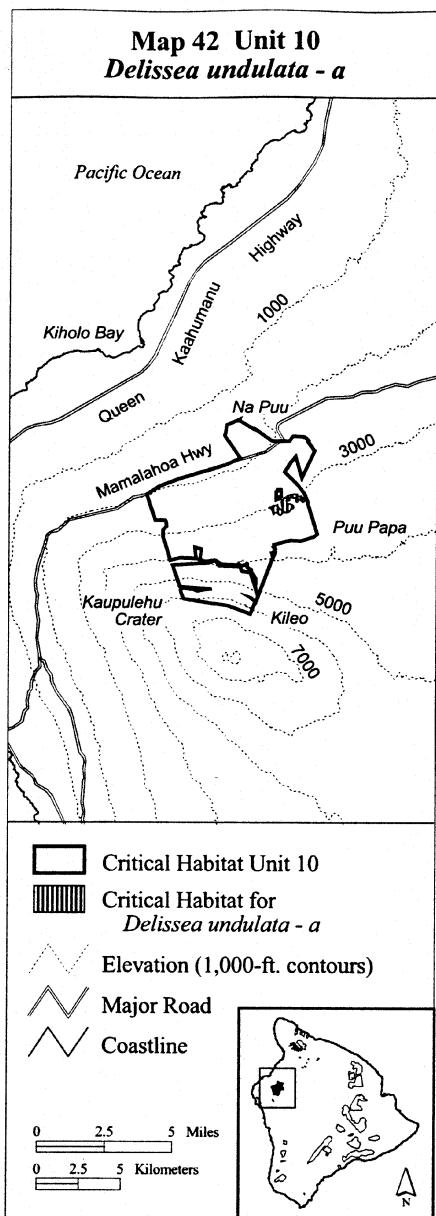


2188399; 202452, 2188462; 202347, 2188728; 202326, 218868; 202389, 2188952; 202459, 2189036; 202543, 2189120; 202683, 2189204; 202781, 2189288; 202922, 2189330; 203132, 2189365; 203279, 2189365; 203279, 2189260; 203454, 2189225; 203650, 2189113; 203776, 2188959; 203629, 218868; 203419, 2189043; 203342, 2188910; 203258, 218868; 203202, 2188945; 203272, 2189113; 203104, 2189120; 202886, 2189162; 202830, 2189099; 202865, 2189001; 202641, 2188966; 202711, 2188798; 202915, 2188742; 203041, 2188672; 203097, 2188602; 203041, 2188490; 202915, 2188497; 202901, 2188420; 202851, 2188322; 202627, 2188210; 202550, 2188280; 202382, 2188147; 202242, 2188070; 202095, 2188217; 201983, 2188231; 201913, 2188119; 201822, 2188224; 201850, 2188343; 201668, 2188553; return to starting point.

(ii) NOTE: Map 42 follows:

(42) Hawaii 10—*Delissea undulata*—a (92 ha, 227 ac)

(i) Unit consists of the following 50 boundary points: Start at 201717, 2188574; 201906, 2188644; 202144, 2188700; 202144, 2188602; 202284, 2188434; 202305,



201009, 2186431; 201114, 2186199; 201409, 2186389; 201640, 2186683; 201675, 2187187; 201738, 2187292; 201892, 2186998; 201913, 2186767; 201843, 2186571; 201780, 2186522; 201808, 2186312; 201913, 2186347; 201969, 2186227; 201899, 2186178; 201997, 2186038; 201934, 2185947; 201987, 2185871; 201923, 2185703; 201864, 2185800; 201794, 2185800; 201857, 2185569; 201871, 2185564; 200825, 2182788; 200596, 2182893; 200701, 2183146; 200785, 2183391; 200890, 2183440; 200841, 2183566; 200848, 2183755; 200806, 2183860; 200855, 2183958; 200862, 2184287; 200596, 2184708; 200596, 2184820; 200351, 2184974; 200316, 2185219; 200197, 2185261; 200183, 2185695; 200204, 2185919; 200092, 2186010; 200113, 2186199; 200169, 2186375; 200211, 2186634; return to starting point.

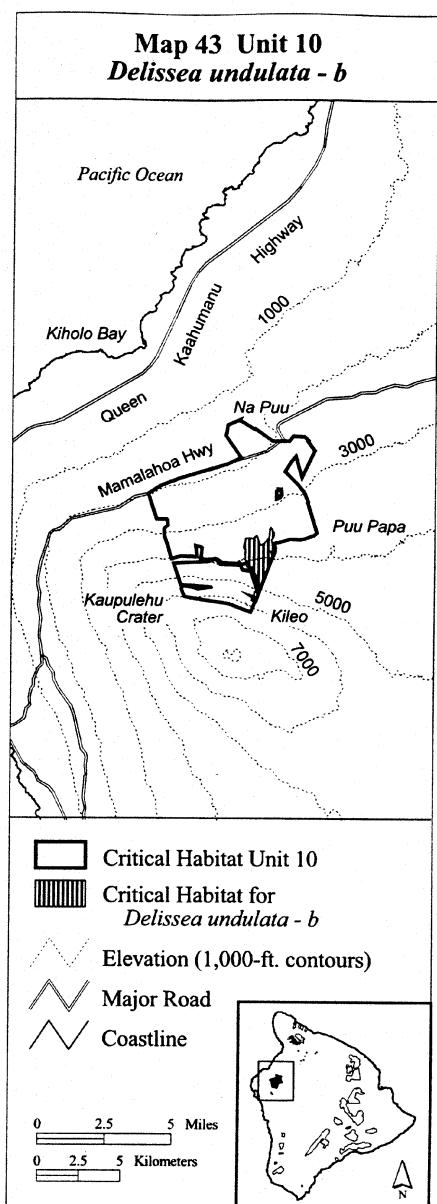
(ii) NOTE: Map 43 follows:

(43) Hawaii 10—*Delissea undulata*—b (379 ha, 938 ac)

(i) Unit consists of the following 46 boundary points: Start at 200358, 2186648; 200652, 2186613; 200897, 2186774;

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(44) Hawaii 10—*Hibiscadelphus hualalaiensis*—a (3,979 ha, 9,831 ac)

(i) Unit consists of the following 38 boundary points: Start at 195782, 2185368; 195522, 2186168; 195315, 2186796; 195326, 2187196; 195544, 2187388; 195469,

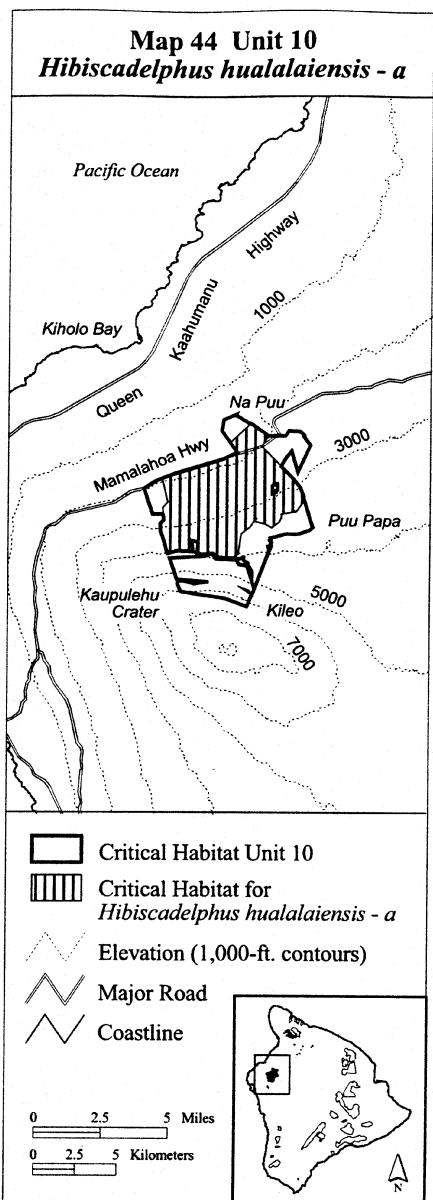
2188155; 195786, 2188492; 195432, 2189916; 199124, 2191069; 199983, 2191543; 199508, 2192106; 200761, 2193288; 201812, 2192545; 201404, 2191895; 203343, 2189879; 203681, 2189439; 203918, 2188866; 203785, 2188371; 203480, 2187932; 202574, 2187761; 202584, 2187526; 202456, 2187271; 201998, 2186930; 201572, 2187207; 200965, 2187345; 200731, 2186962; 200177, 2186557; 200011, 2185340; 199774, 2185089; 198932, 2185139; 198670, 2185243; 198391, 2185428; 198036, 2185330; 197566, 2185385; 197604, 2186079; 197221, 2186183; 197270, 2185549; 196319, 2185538; return to starting point.

(ii) Excluding one area bounded by the following 12 points (15 ha, 38 ac): Start at 202034, 2189562; 202141, 2189566; 202153, 2189649; 202308, 2189645; 202298, 2189564; 202339, 2189548; 202329, 2189219; 202193, 2189187; 202230, 2189088; 202042, 2189024; 202020, 2189151; 202024, 2189554; return to starting point.

(iii) NOTE: Map 44 follows:

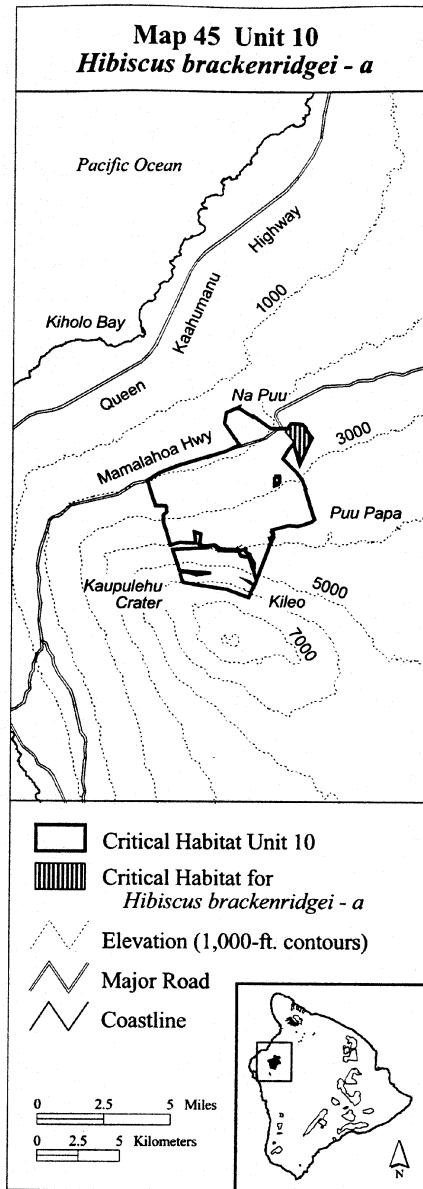
204306, 2191983; 203553, 2190355; 203111, 2191829; return to starting point.

(ii) NOTE: Map 45 follows:



(45) Hawaii 10—*Hibiscus brackenridgei-a* (196 ha, 485 ac)

(i) Unit consists of the following six boundary points: Start at 202687, 2192346; 203014, 2192842; 203739, 2192737;



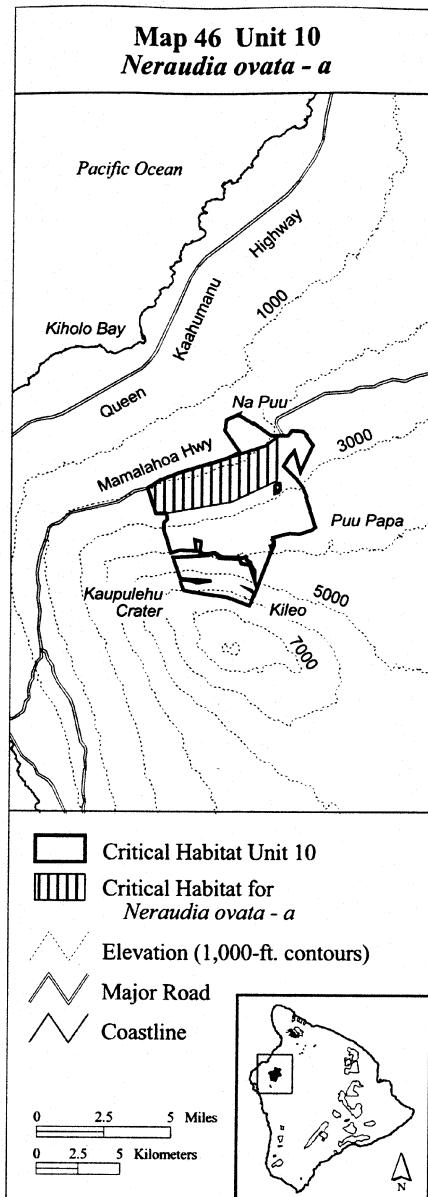
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(46) Hawaii 10—*Neraudia ovata*—a (1,859 ha, 4,593 ac)

(i) Unit consists of the following 15 boundary points: Start at 194344, 2189314; 194343, 2189318; 194355, 2189326; 195020, 2189752; 195454, 2189938; 196227, 2190232; 199076, 2191106; 201428, 2191880; 202171, 2192469; 202165, 2191079; 202163, 2189814; 199428, 2188470; 195418, 2187770; 194855, 2187783; 194588, 2188581; return to starting point.

(ii) NOTE: Map 46 follows:

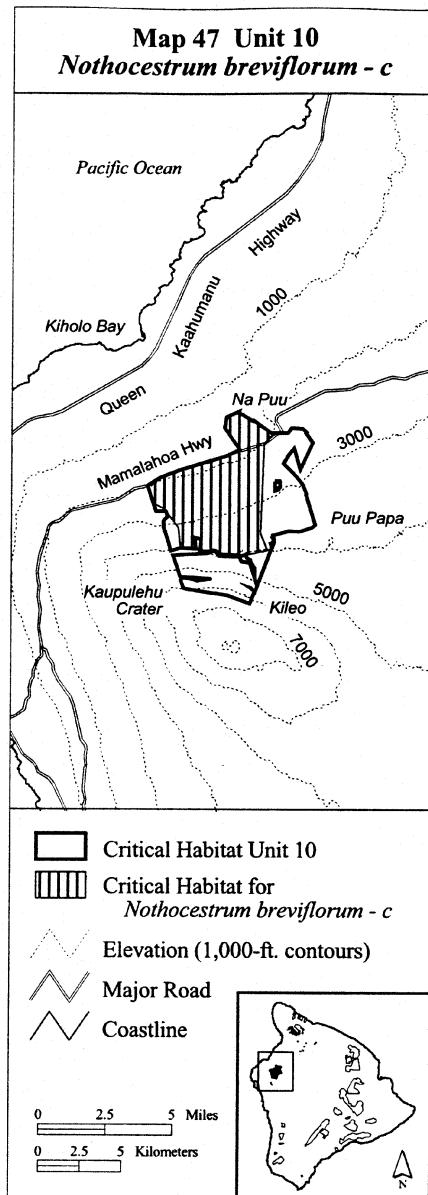


(47) Hawaii 10—*Nothocestrum breviflorum*—c (3,627 ha, 8,964 ac)

(i) Unit consists of the following 29 boundary points: Start at 194693, 2188269; 194383, 2189286; 195034, 2189776; 195460, 2189937; 196240, 2190194; 199103,

2191128; 199891, 2191533; 198991, 2192862; 199103, 2193492; 199824, 2193830; 199804, 2193770; 200696, 2193256; 201895, 2192456; 201355, 2191804; 201174, 2186424; 201586, 2185393; 199915, 2185040; 199838, 2185152; 198796, 2185246; 198417, 2185384; 197754, 2185341; 197538, 2185442; 197616, 2186073; 197228, 2186185; 197289, 2185505; 196333, 2185522; 196200, 2186785; 195323, 2187943; 194697, 2188256; return to starting point.

(ii) NOTE: Map 47 follows:



(48) Hawaii 10—*Pleomele hawaiiensis*—b  
(1,338 ha, 3,306 ac)

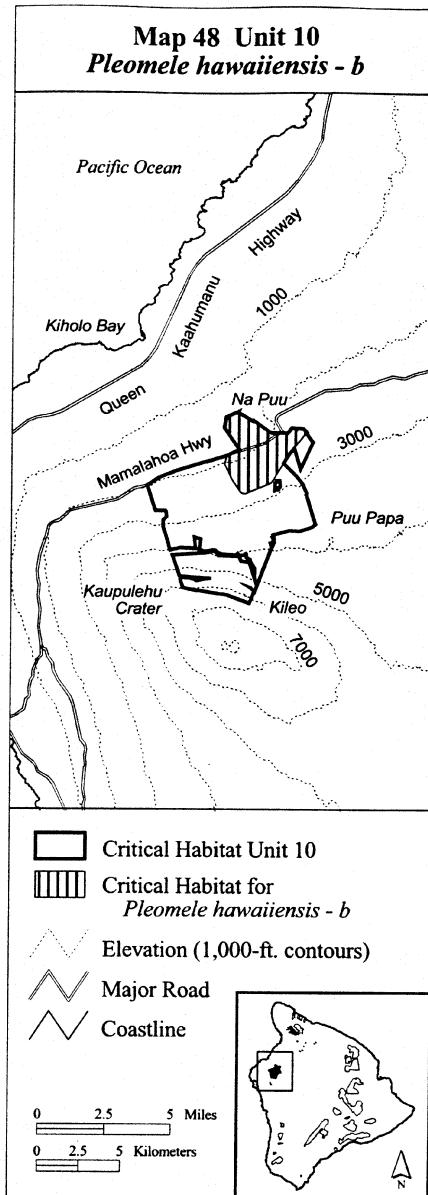
(i) Unit consists of the following 19 boundary points: Start at 199227, 2191119; 199931, 2191535; 199427, 2192287;

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198994, 2192926; 199211, 2193518; 199835, 2193778; 201804, 2192540; 202800, 2192542; 203018, 2192863; 203684, 2192822; 203919, 2192569; 203588, 2192149; 202916, 2191296; 201823, 2189505; 200231, 2188809; 200012, 2188896; 199513, 2189670; 199023, 2190652; 199126, 2191046; return to starting point.

(ii) NOTE: Map 48 follows:



(49) Hawaii 10—*Solanum incompletum*—a  
(705 ha, 1,741 ac)

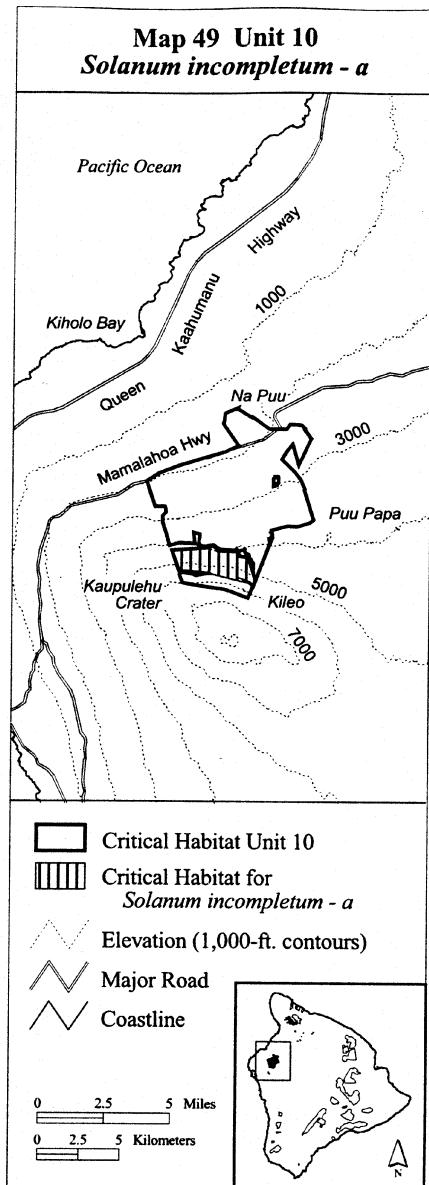
(i) Unit consists of the following 14 boundary points: Start at 200840, 2183071; 200105, 2183211; 198217, 2183674;

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196354, 2183822; 195904, 2185079; 198074, 2185218; 198313, 2185355; 198524, 2185294; 198681, 2185062; 199717, 2185030; 199911, 2185024; 200028, 2184733; 200540, 2184657; 200956, 2183332; return to starting point.

(ii) NOTE: Map 49 follows:



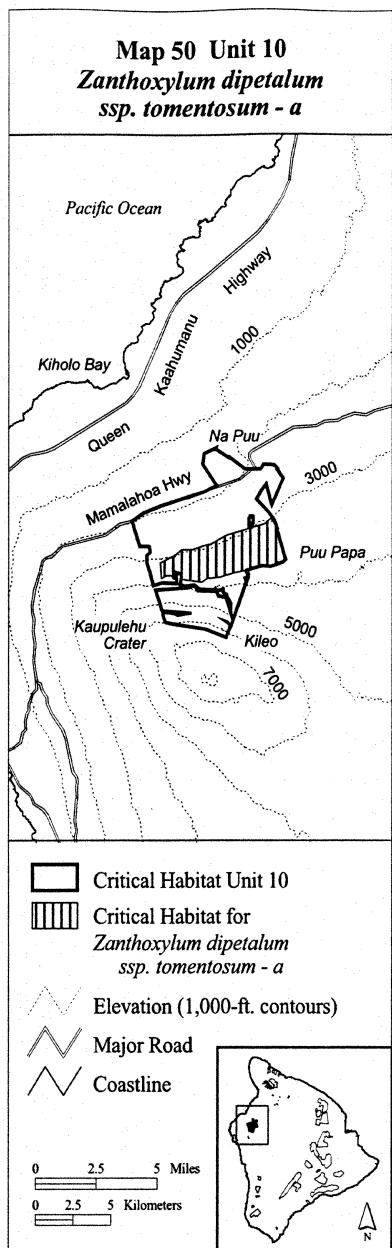
(50) Hawaii 10—*Zanthoxylum dipetalum* ssp. *tomentosum*—a (1,685 ha, 4,164 ac)

(i) Unit consists of the following 30 boundary points: Start at 204490, 2186961; 204259, 2186791; 203663, 2186586; 203502, 2186552; 202908, 2186594; 202064, 2186341; 200938, 2186115; 200094, 2185862; 199277, 2185806; 198968, 2185581; 197898, 2185721; 197620, 2185755; 197630, 2186116; 197213, 2186192; 197260, 2185765; 197082, 2185778; 196970, 2185975; 196660, 2185975; 196294, 2185806; 196217, 2186760; 197251, 2187269; 197645, 2187579; 198321, 2187579; 199334, 2187860; 199503, 2187860; 200544, 2188451; 203129, 2189150; 203527, 2189491; 203802, 2189055; 203972, 2188619; return to starting point.

(ii) NOTE: Map 50 follows:

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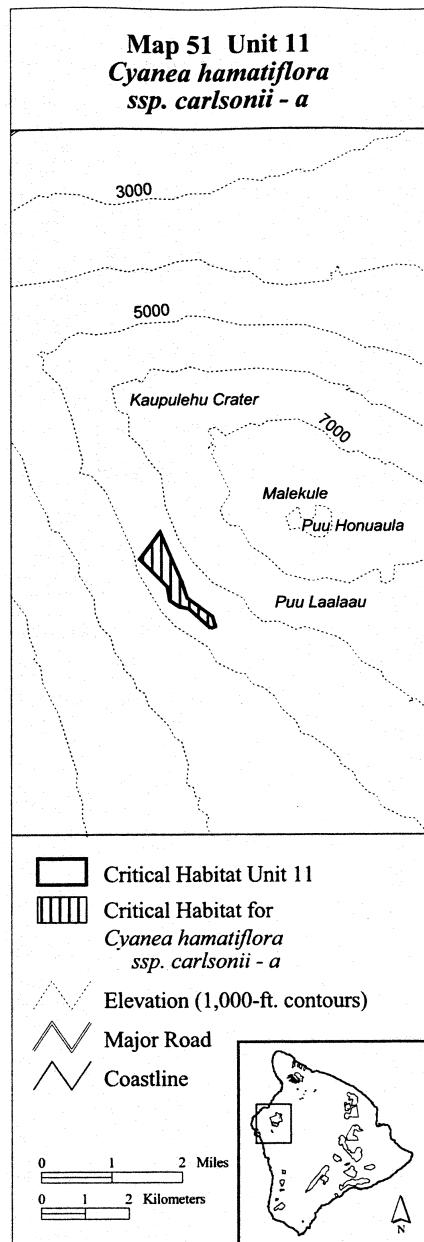


2177104; 196674, 2177566; 196458, 2177613; 196239, 2177751; 196187, 2178067; 195553, 2178701; 196028, 2179334; 196530, 2178147; 196637, 2177811; 197221, 2177377; 197278, 2177142; return to starting point.

(ii) NOTE: Map 51 follows:

(51) Hawaii 11—*Cyanea hamatiflora* ssp.  
*carlsonii*—a (92 ha, 227 ac)

(i) Unit consists of the following 11 boundary points: Start at 197174,

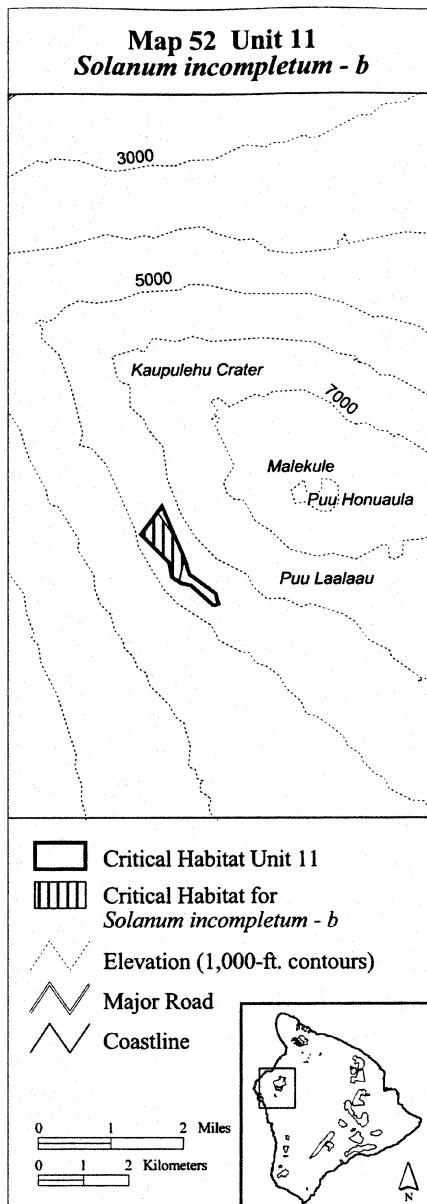


(52) Hawaii 11—*Solanum incompletum*—b  
(57 ha, 141 ac)

(i) Unit consists of the following seven boundary points: Start at 195939,

2179184; 196289, 2178679; 196513, 2178138; 196403, 2177670; 196252, 2177759; 196204, 2178081; 195581, 2178700; return to starting point.

(ii) NOTE: Map 52 follows:



(53)–(56) [Reserved]

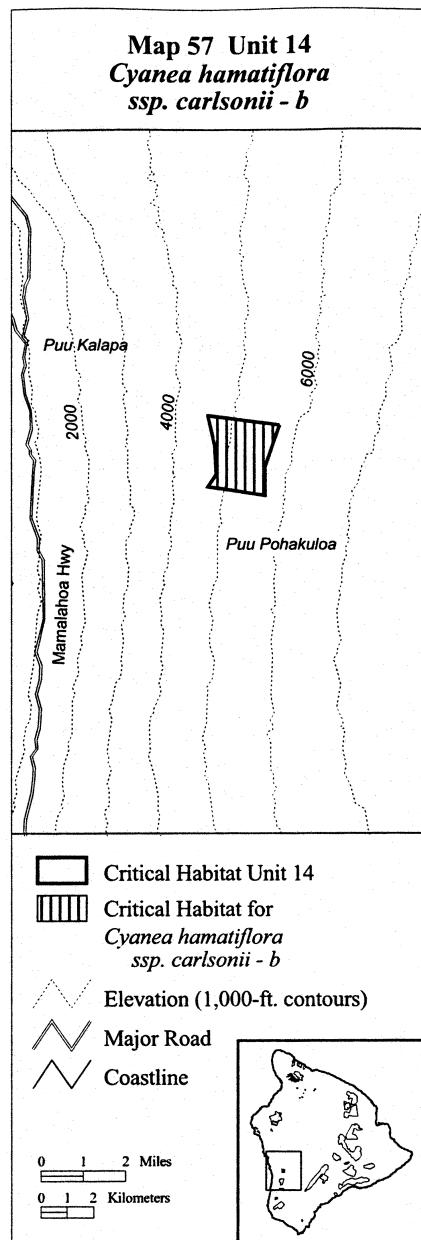
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(57) Hawaii 14—*Cyanea hamatiflora* ssp. *carlsonii*—b (597 ha, 1,475 ac)

(i) Unit consists of the following 10 boundary points: Start at 207156, 2146304; 207134, 2146239; 206598, 2144681; 206598, 2143570; 204429, 2143915; 204728, 2144393; 204674, 2145490; 204674, 2145491; 204426, 2146629; 204425, 2146649; return to starting point.

(ii) NOTE: Map 57 follows:



(58) Hawaii 15—*Cyanea hamatiflora* ssp. *carlsonii*—c (1,045 ha, 2,583 ac)

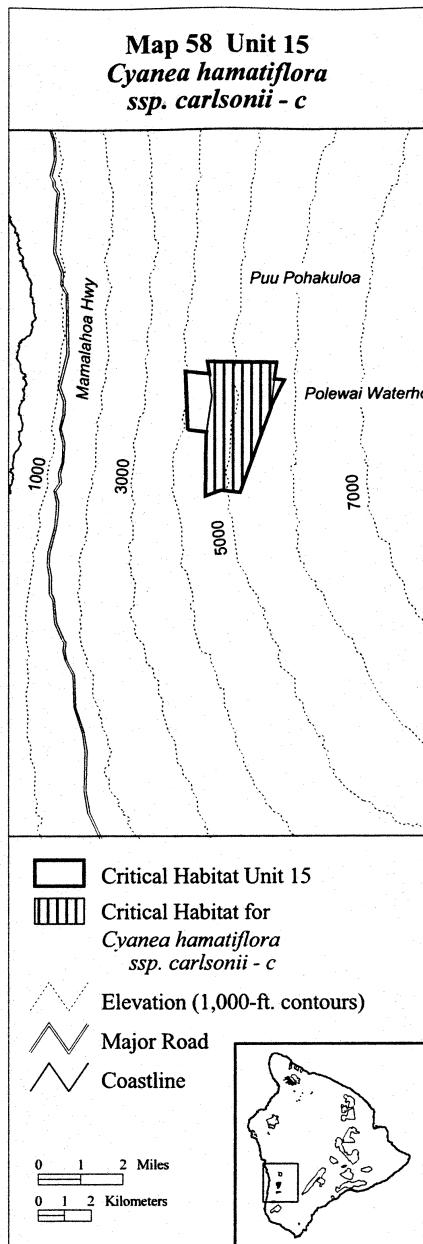
(i) Unit consists of the following eight boundary points: Start at 205937,

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2136720; 204747, 2133469; 204039, 2133547; 203420, 2133302; 203440, 2135670; 203670, 2137181; 203517, 2138526; 206149, 2138468; return to starting point.

(ii) NOTE: Map 58 follows:



(59) Hawaii 15—*Cyanea stictophylla*—a (685 ha, 1,693 ac)

(i) Unit consists of the following five boundary points: Start at 202738, 2135888; 202669, 2138135; 206446, 2137807; 205568, 2136027; 203447, 2135810; return to starting point.

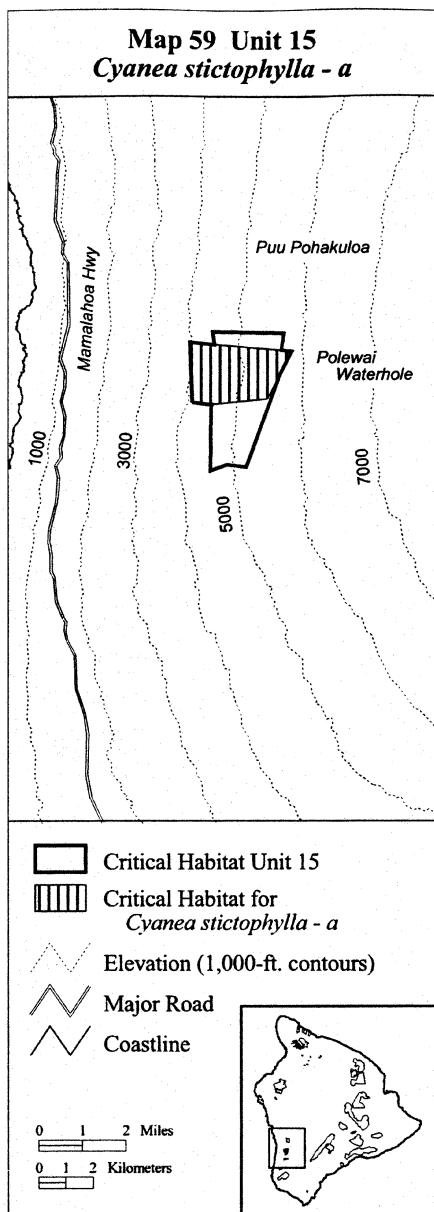
(ii) NOTE: Map 59 follows:

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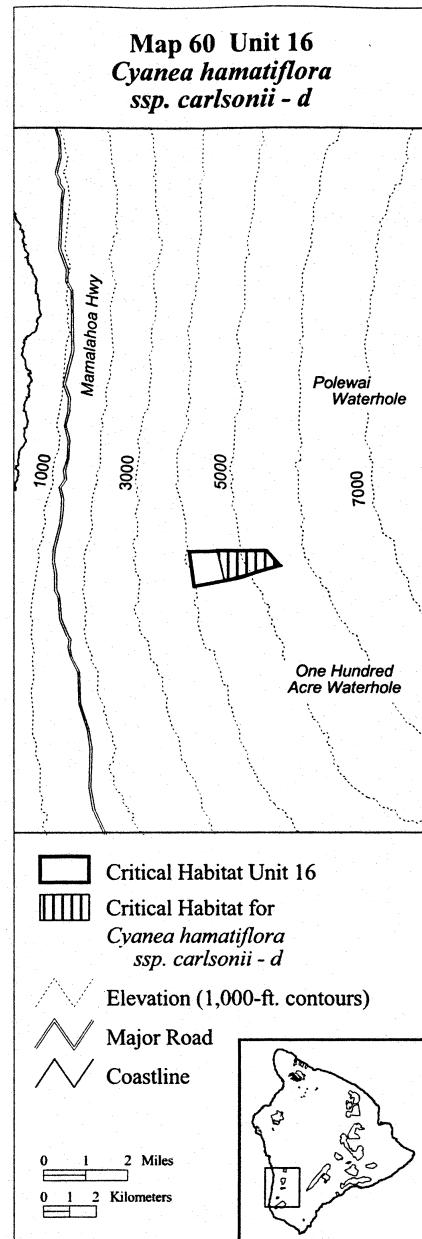
2129916; 203715, 2131071; 205603, 2131073; 206118, 2130489; return to starting point.

(ii) NOTE: Map 60 follows:



(60) Hawaii 16—*Cyanea hamatiflora* ssp. *carlsonii*—d (186 ha, 459 ac)

(i) Unit consists of the following four boundary points: Start at 203994,



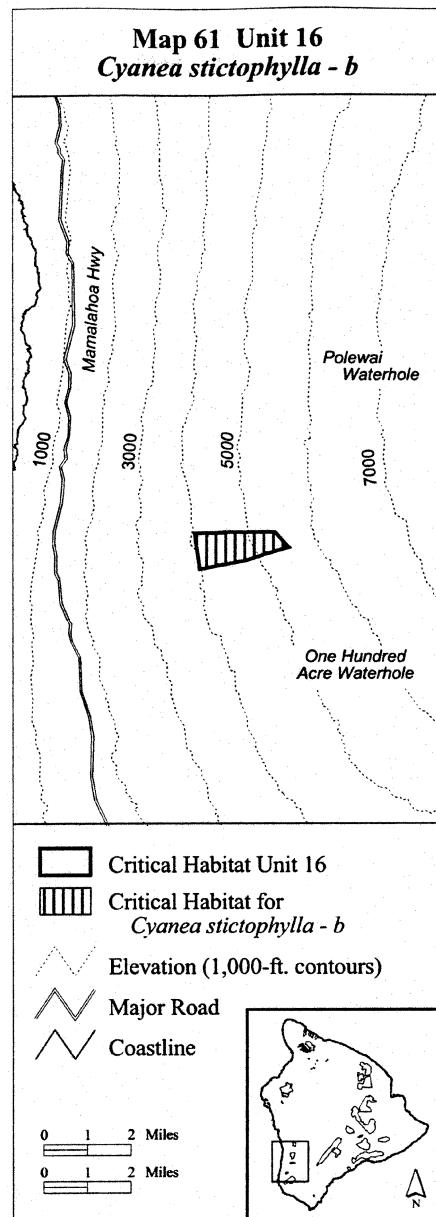
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- (61) Hawaii 16—*Cyanea stictophylla*—b  
 (327 ha, 809 ac)

(i) Unit consists of the following five boundary points: Start at 206085, 2130525; 204548, 2130013; 202838, 2129682; 202649, 2131030; 205588, 2131077; return to starting point.

(ii) NOTE: Map 61 follows:



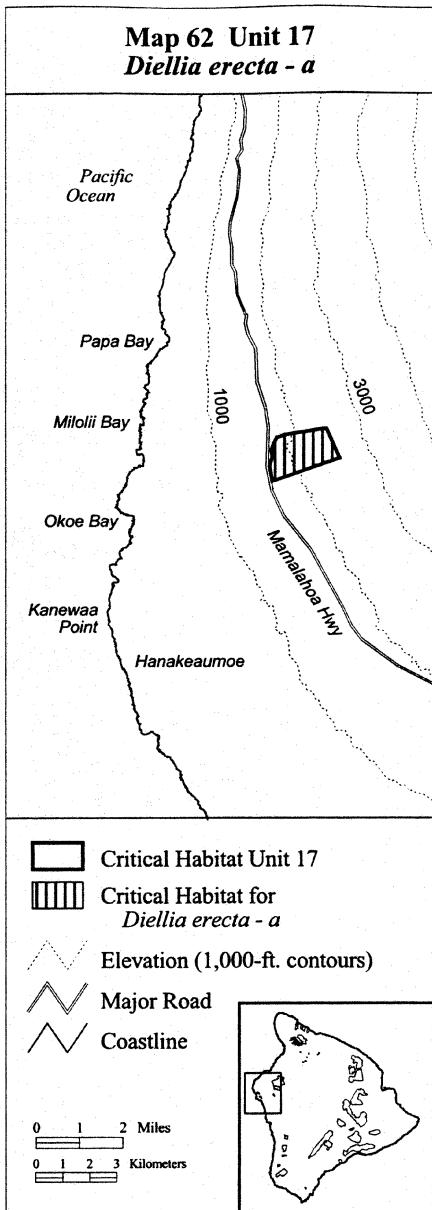
- (62) Hawaii 17—*Diellia erecta*—a (329 ha, 814 ac)

(i) Unit consists of the following nine boundary points: Start at 199021, 2121439; 198916, 2122019; 199049, 2122319;

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199008, 2122707; 199063, 2122847; 199186, 2123092; 199520, 2123204; 201031, 2123446; 201505, 2122323; return to starting point.

(ii) NOTE: Map 62 follows:



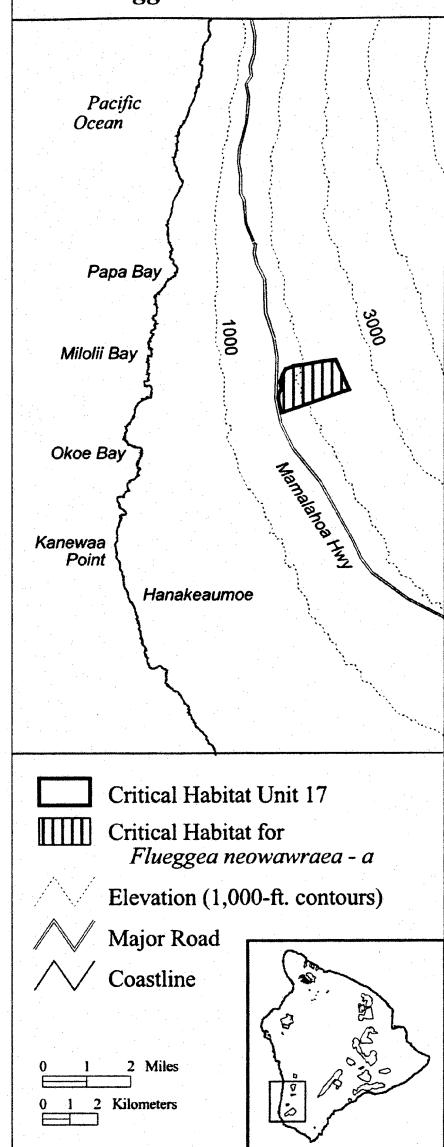
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(63) Hawaii 17—*Flueggea neowawraea*—a (327 ha, 807 ac)

(i) Unit consists of the following eight boundary points: Start at 199031, 2121453; 198919, 2122094; 199007, 2122357; 198981, 2122641; 199188, 2123085; 199474, 2123194; 201018, 2123445; 201491, 2122325; return to starting point.

(ii) NOTE: Map 63 follows:

**Map 63 Unit 17**  
***Flueggea neowawraea - a***



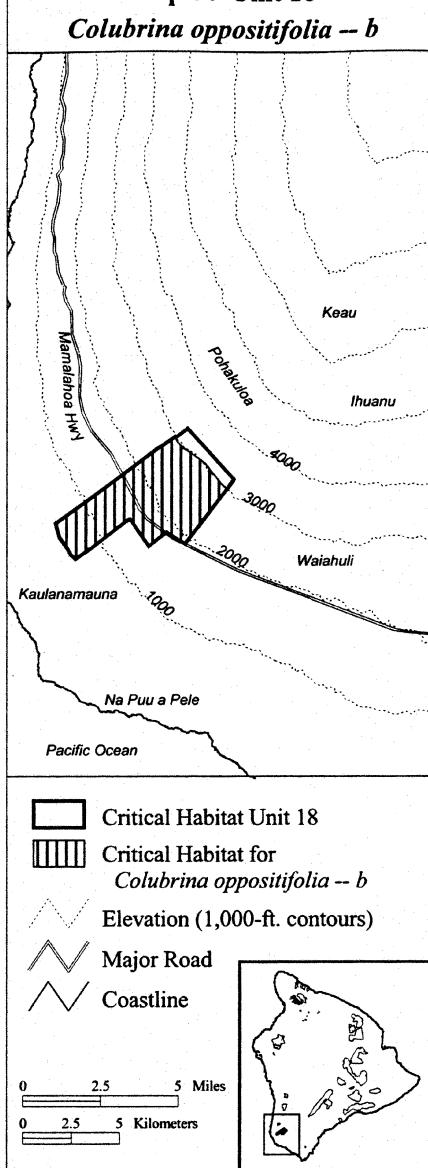
(64) Hawaii 18—*Colubrina oppositifolia*—b (2,717 ha, 6,713 ac)

(i) Unit consists of the following 15 boundary points: Start at 198394, 2113625; 198223, 2113930; 197796, 2114535;

197583, 2115280; 203752, 2119808; 203928, 2119514; 204315, 2119167; 205315, 2118433; 206212, 2117332; 206446, 2117067; 204284, 2114251; 203373, 2114863; 202434, 2114094; 201438, 2115531; 198636, 2113397; return to starting point.

(ii) NOTE: Map 64 follows:

**Map 64 Unit 18**  
***Colubrina oppositifolia -- b***



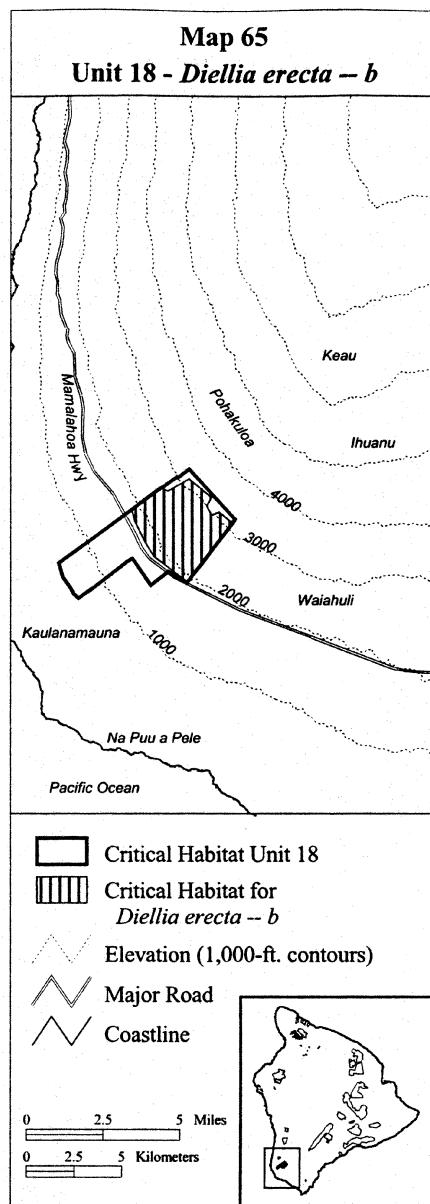
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(65) Hawaii 18—*Diellia erecta*—b (1,615 ha, 3,992 ac)

(i) Unit consists of the following 13 boundary points: Start at 202997, 2119281; 203310, 2119053; 204449, 2119707; 205626, 2118736; 205346, 2118306; 205626, 2117783; 205999, 2117970; 206709, 2117375; 204354, 2114272; 202588, 2115599; 202097, 2116400; 201568, 2117511; 201401, 2118078; return to starting point.

(ii) NOTE: Map 65 follows:



(66) Hawaii 18—*Flueggea neowawraea*—b (1,148 ha, 2,838 ac)

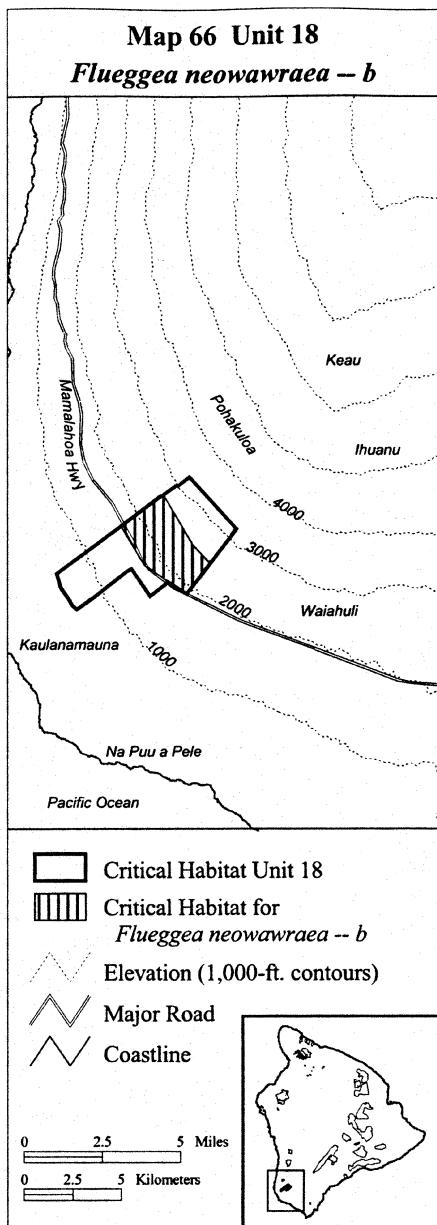
(i) Unit consists of the following six boundary points: Start at 203129, 2119316; 204604, 2116730; 205505, 2115780;

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204286, 2114193; 202146, 2115653; 200912, 2117708; return to starting point.

(ii) NOTE: Map 66 follows:



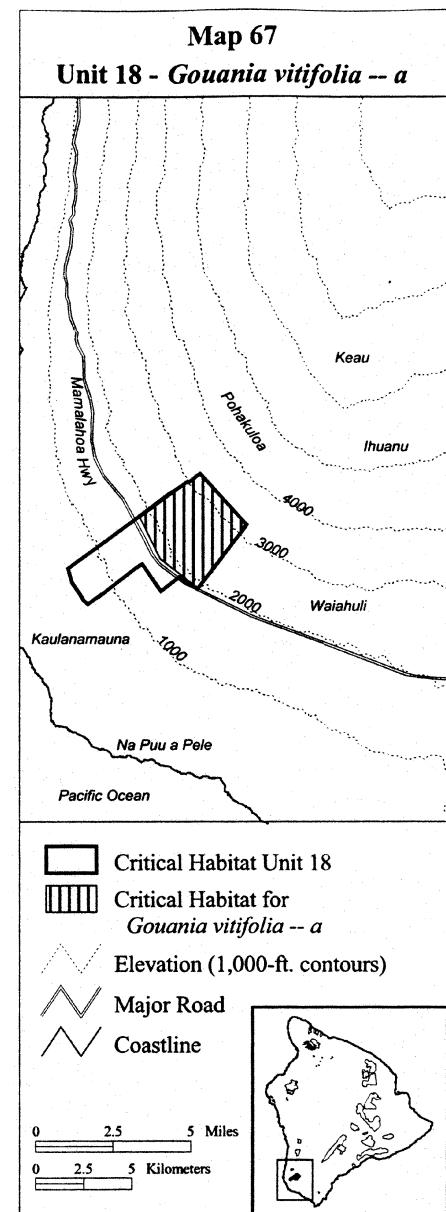
(67) Hawaii 18—*Gouania vitifolia*—a  
(1,785 ha, 4,412 ac)

(i) Unit consists of the following five boundary points: Start at 204444, 2120239; 206850, 2117574; 204309, 2114257; 202399, 2115771; 201311, 2117954; return to starting point.

(ii) NOTE: Map 67 follows:

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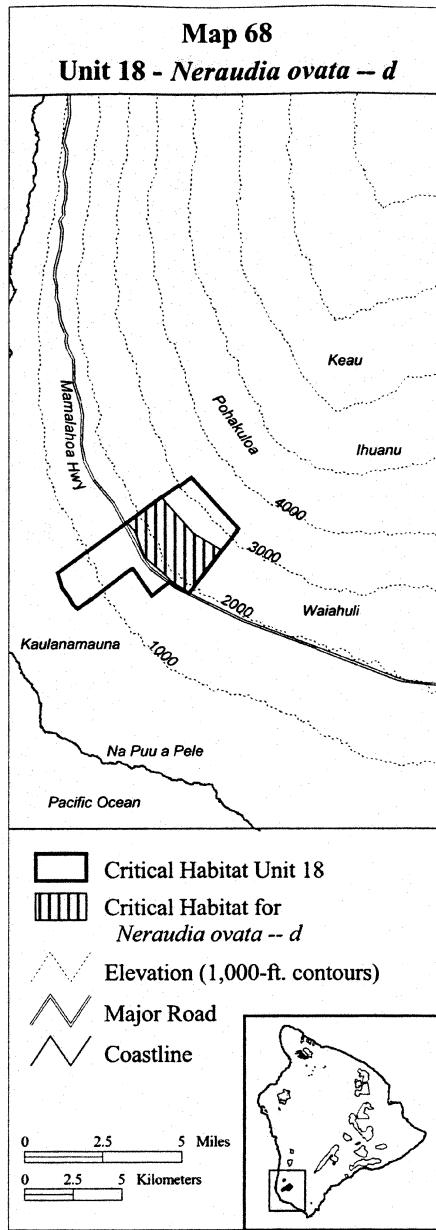


(68) Hawaii 18—*Neraudia ovata*—d (1,134 ha, 2,801 ac)

(i) Unit consists of the following 10 boundary points: Start at 201174, 2117843; 202959, 2119186; 204559, 2117309;

205954, 2116477; 204277, 2114280; 203399, 2114850; 202976, 2115309; 202698, 2115528; 202028, 2116090; 201532, 2117457; return to starting point.

(ii) NOTE: Map 68 follows:



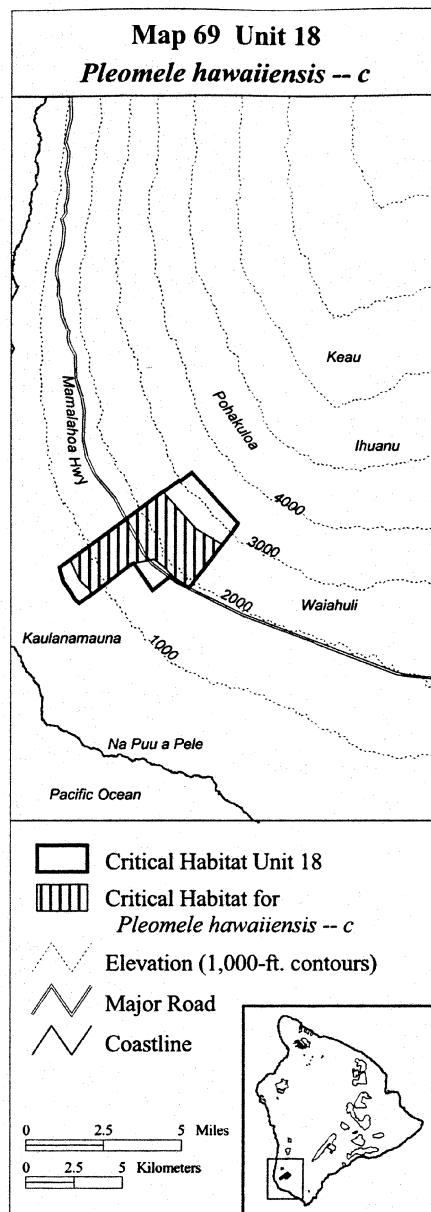
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(69) Hawaii 18—*Pleomele hawaiiensis*—c  
(1,997 ha, 4,934 ac)

(i) Unit consists of the following 14 boundary points: Start at 202966, 2119257; 204672, 2117280; 206034, 2116476; 204325, 2114252; 203522, 2114753; 203049, 2115266; 202477, 2115720; 201375, 2115486; 199227, 2113813; 199190, 2114100; 198653, 2114587; 198378, 2115149; 198141, 2115661; 201104, 2117894; return to starting point.

(ii) NOTE: Map 69 follows:



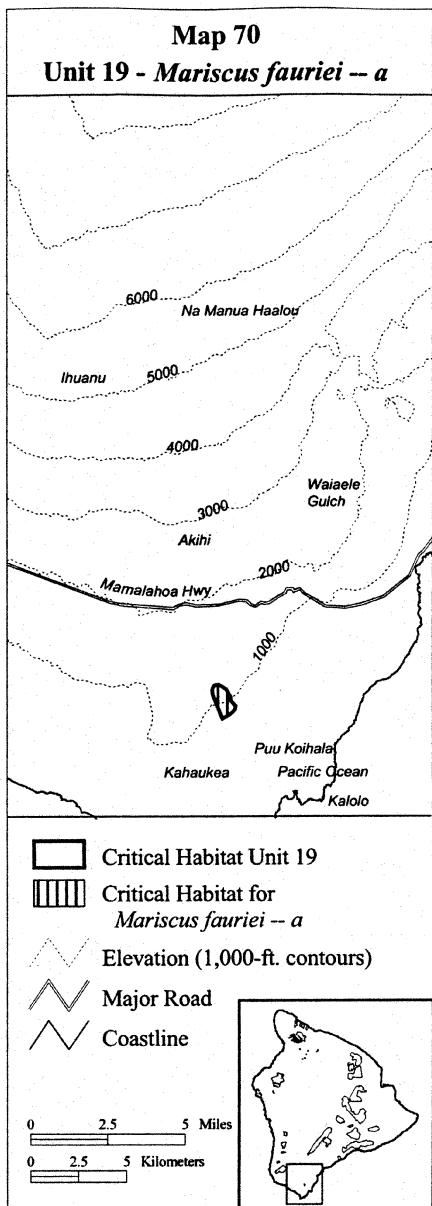
(70) Hawaii 19—*Mariscus fauriei*—a (127 ha, 313 ac)

(i) Unit consists of the following 14 boundary points: Start at 220519, 2105287; 220658, 2105408; 220821, 2105428;

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221200, 2105198; 221467, 2104758; 221444, 2104588; 221445, 2104587; 221710, 2104303; 221694, 2104107; 221493, 2103896; 221254, 2103732; 221032, 2103615; 220535, 2104849; 220496, 2105093; return to starting point.

(ii) NOTE: Map 70 follows:

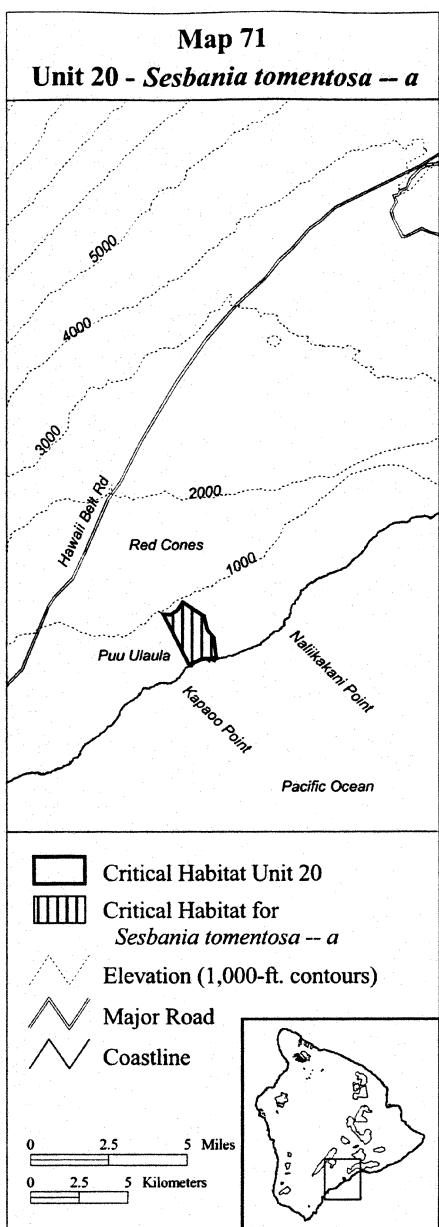


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(71) Hawaii 20—*Sesbania tomentosa*—a (486 ha, 1,201 ac)

(i) Unit consists of the following nine boundary points: Coast; 249798, 2124556; 248451, 2124193; 247078, 2126859; 247458, 2126835; 247811, 2127062; 248104, 2127469; 249187, 2126745; 249330, 2126069; 249701, 2125632.

(ii) NOTE: Map 71 follows:



265956, 2131806; 266250, 2131617; 266582, 2131721; 267180, 2131645; 267711, 2131370; 267789, 2131408; 267891, 2131332; 268138, 2131256; 268432, 2131114; 268755, 2131009; 269049, 2130962; 269248, 2130905; 269266, 2130849; return to starting point.

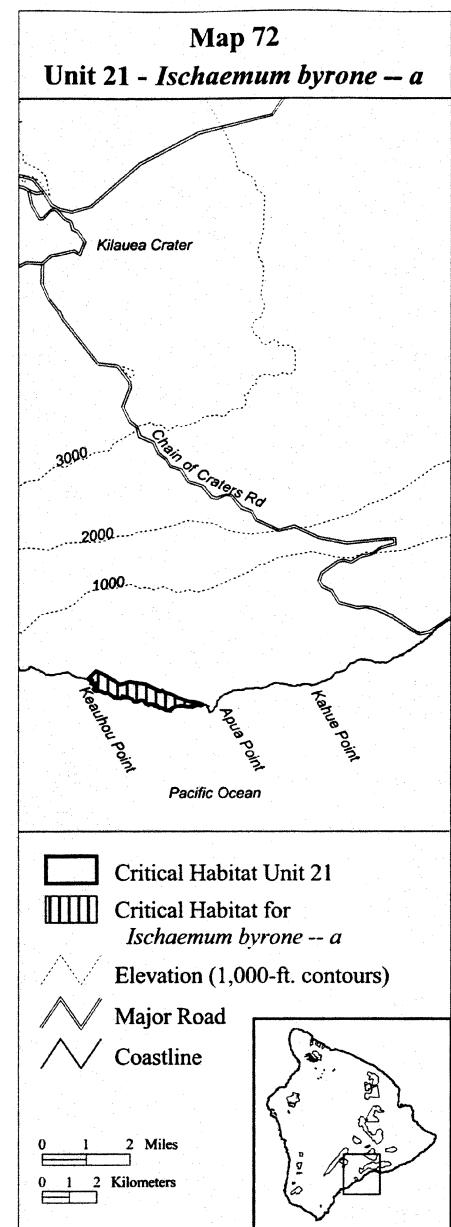
(ii) NOTE: Map 72 follows:

(72) Hawaii 21—*Ischaemum byrone*—a  
(206 ha, 510 ac)

(i) Unit consists of the following 16 boundary points: Start at 265058, 2131828; 265367, 2132139; 265624, 2132015;

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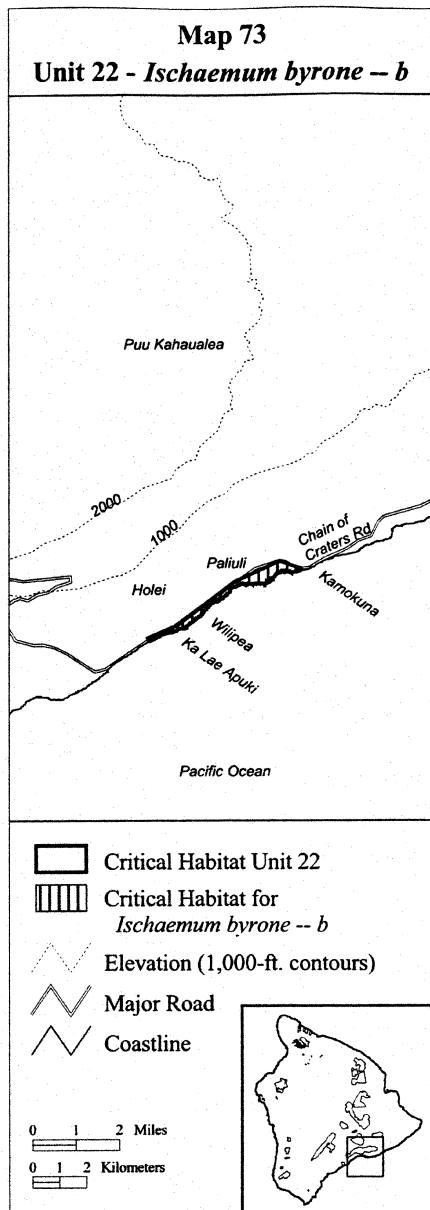


(73) Hawaii 22—*Ischaemum byrone*—b  
(159 ha, 393 ac)

(i) Unit consists of the following 11 boundary points: Coast; 284893, 2137276; 279221, 2134615; 279221, 2134615; 279175,

2134728; 280175, 2135157; 281315, 2136008; 282395, 2136841; 284061, 2137614; 284803, 2137355; 284850, 2137360; 284874, 2137349.

(ii) NOTE: Map 73 follows:



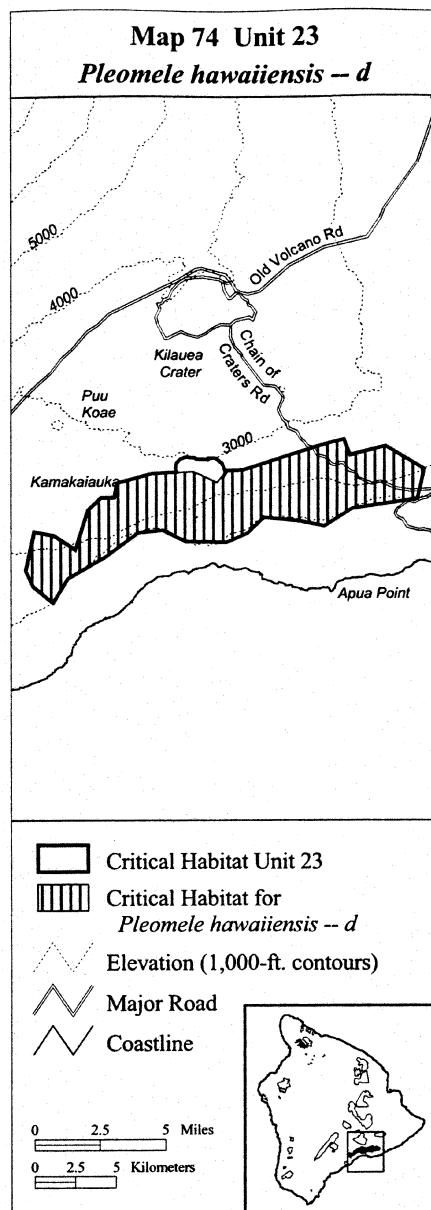
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(74) Hawaii 23—*Pleomele hawaiiensis*—d  
(8,943 ha, 22,097 ac)

(i) Unit consists of the following 33 boundary points: Start at 274892, 2136370; 270874, 2135790; 269174, 2134697; 267700, 2135019; 265425, 2135256; 264383, 2134214; 263150, 2133692; 260638, 2133740; 259217, 2134451; 257700, 2134309; 255757, 2132839; 253387, 2131465; 252487, 2129948; 251241, 2130960; 250795, 2131956; 251310, 2134361; 252547, 2134120; 253852, 2133261; 254607, 2135700; 255437, 2136482; 256222, 2136490; 256394, 2137383; 258592, 2138001; 261132, 2138090; 262576, 2137383; 263163, 2138161; 264146, 2138195; 268506, 2139617; 269645, 2139914; 270342, 2140091; 270763, 2139124; 272917, 2139676; 275306, 2138240; return to starting point.

(ii) NOTE: Map 74 follows:



(75) Hawaii 23—*Sesbania tomentosa*—b  
(803 ha, 1,984 ac)

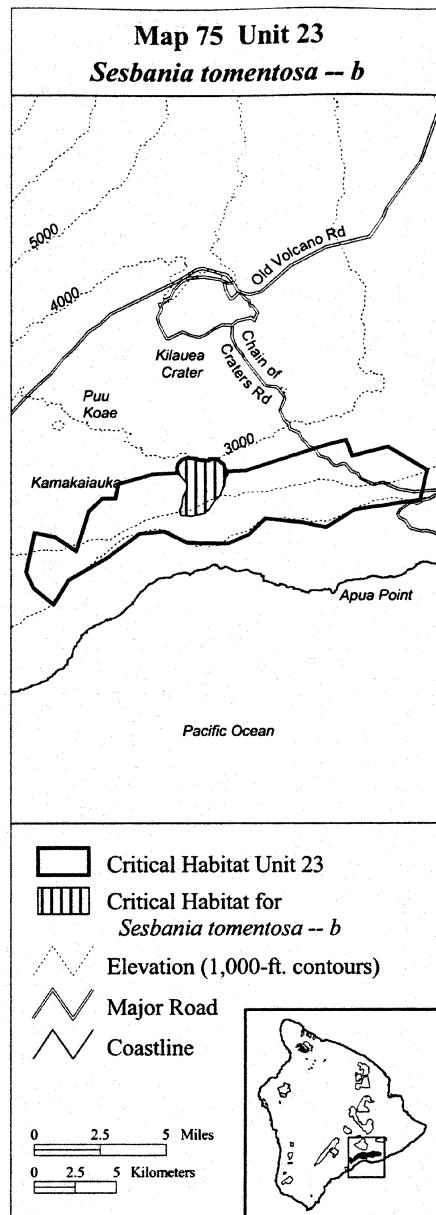
(i) Unit consists of the following 27 boundary points: Start at 260007, 2138277; 260064, 2138614; 260288, 2138861; 260620, 2139007; 260945, 2138979; 261187,

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2138985; 261288, 2138856; 261541, 2138867; 261945, 2138822; 262013, 2138945; 262440, 2138951; 262861, 2138592; 263063, 2138125; 262940, 2137446; 262614, 2136665; 262294, 2136266; 262007, 2135817; 261704, 2135564; 260951, 2135401; 260255, 2135424; 260176, 2135727; 260316, 2136075; 260361, 2136524; 260608, 2137002; 260580, 2137440; 260153, 2137906; 260058, 2138064; return to starting point.

(ii) NOTE: Map 75 follows:

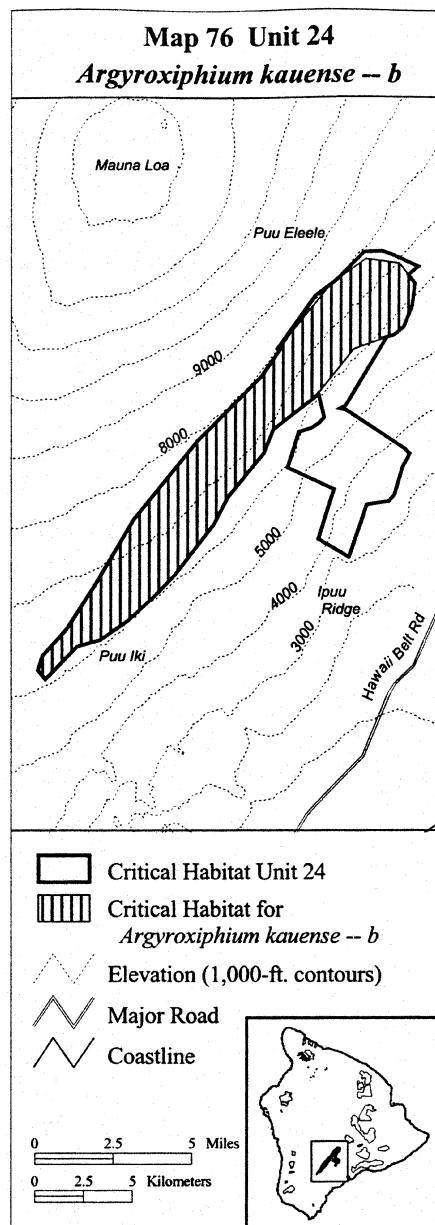


(76) Hawaii 24—*Argyroxiphium kauense*—b (7,795 ha, 19,261 ac)

(i) Unit consists of the following 27 boundary points: Start at 241932, 2146263; 241417, 2145847; 239409, 2145112;

237401, 2142639; 235247, 2140949; 234781, 2139725; 232871, 2137399; 232161, 2136003; 230227, 2133432; 229223, 2132403; 227778, 2131032; 226357, 2130052; 225133, 2129685; 223541, 2127995; 223150, 2128461; 223394, 2129220; 224594, 2130542; 226039, 2132819; 227998, 2136174; 231377, 2140386; 234659, 2143741; 236177, 2145945; 238210, 2148467; 239997, 2149789; 241711, 2149544; 242495, 2148491; 242372, 2147341; return to starting point.

(ii) NOTE: Map 76 follows:



(77) Hawaii 24—*Asplenium fragile* var. *insulare*—a (907 ha, 2,241 ac)

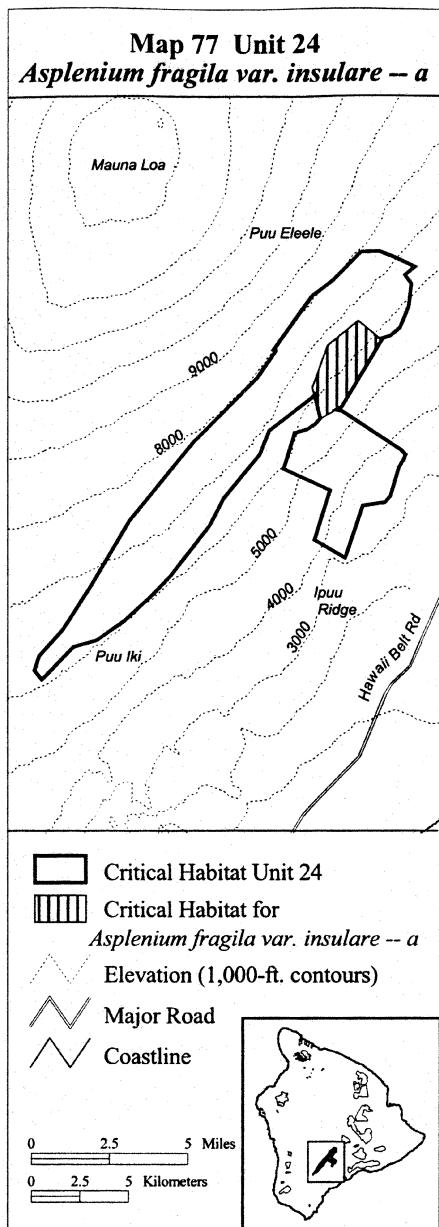
(i) Unit consists of the following six boundary points: Start at 239781, 2146615; 241003, 2145626; 238959, 2142183;

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237893, 2141565; 237452, 2143181; 238209, 2145335; return to starting point.

(ii) NOTE: Map 77 follows:

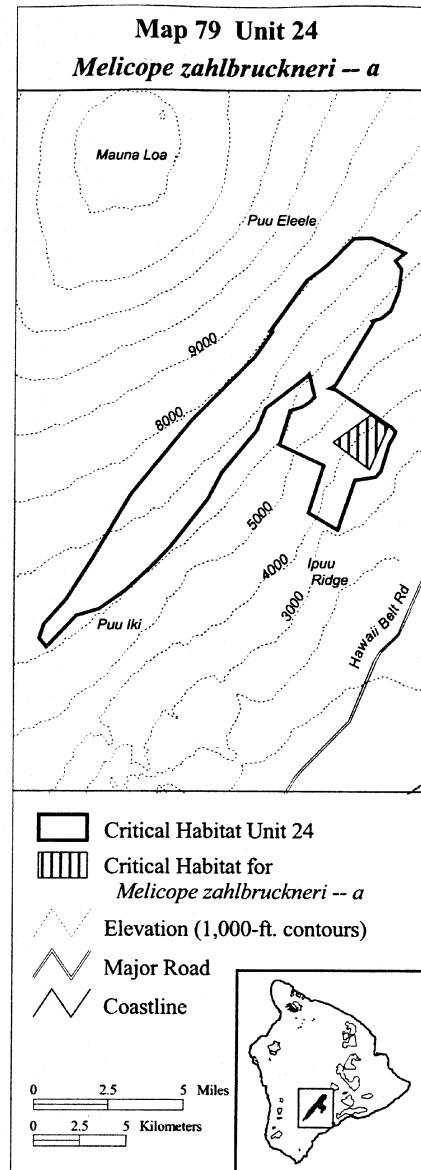
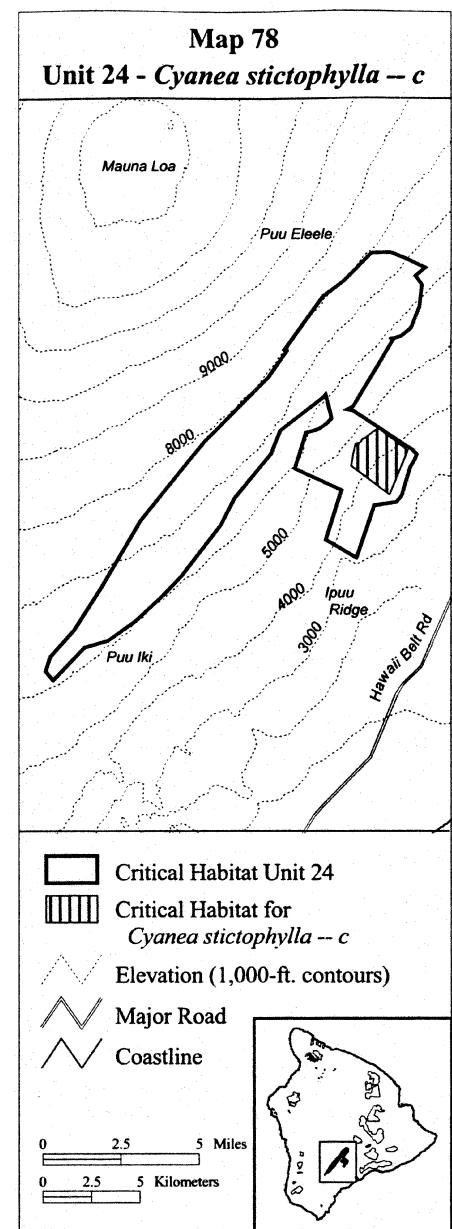


(78) Hawaii 24—*Cyanea stictophylla*—c  
(584 ha, 1,443 ac)

(i) Unit consists of the following nine boundary points: Start at 240250, 2141066; 241783, 2139920; 240835, 2137607; 238868, 2139097; 238947, 2139692; 239116, 2140248; 239332, 2140329; 239455, 2140496; 239602, 2140570; return to starting point.

(ii) NOTE: Map 78 follows:

2139105; 240894, 2140601; 241788, 2139910;  
240819, 2137611; return to starting point.  
(ii) NOTE: Map 79 follows:



(79) Hawaii 24—*Melicope zahlbruckneri*—a (434 ha, 1,072 ac)

(i) Unit consists of the following four boundary points: Start at 238867,

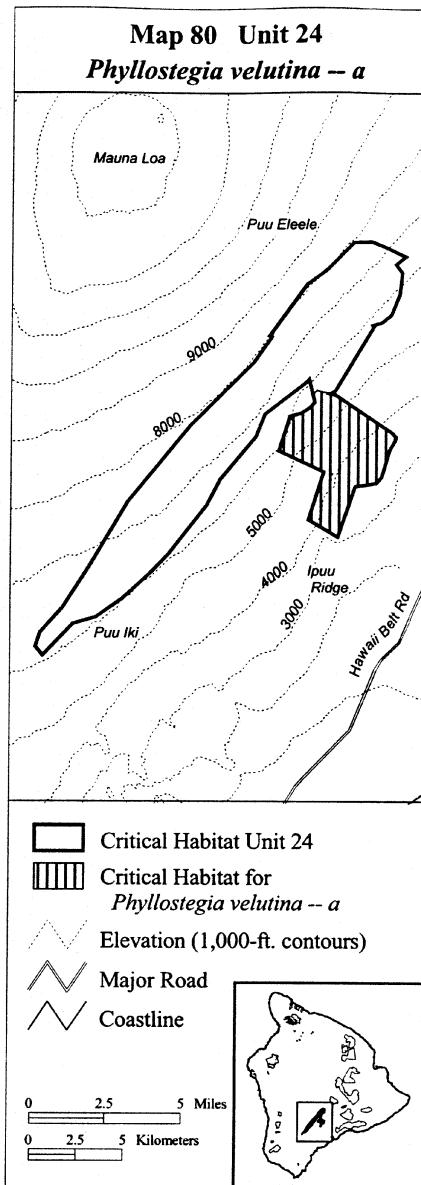
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(80) Hawaii 24—*Phyllostegia velutina*—a  
(2,466 ha, 6,093 ac)

(i) Unit consists of the following 18 boundary points: Start at 238962, 2141970; 242007, 2139925; 242207, 2139714; 242118, 2139436; 241893, 2139030; 241440, 2137533; 241162, 2137224; 240062, 2137024; 239123, 2134346; 237550, 2135268; 238350, 2137847; 235994, 2138947; 236552, 2140823; 237172, 2141003; 237594, 2141281; 237850, 2141570; 237828, 2142070; 238005, 2142204; return to starting point.

(ii) NOTE: Map 80 follows:

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(81) Hawaii 24—*Plantago hawaiensis*—a  
(1,348 ha, 3,330 ac)

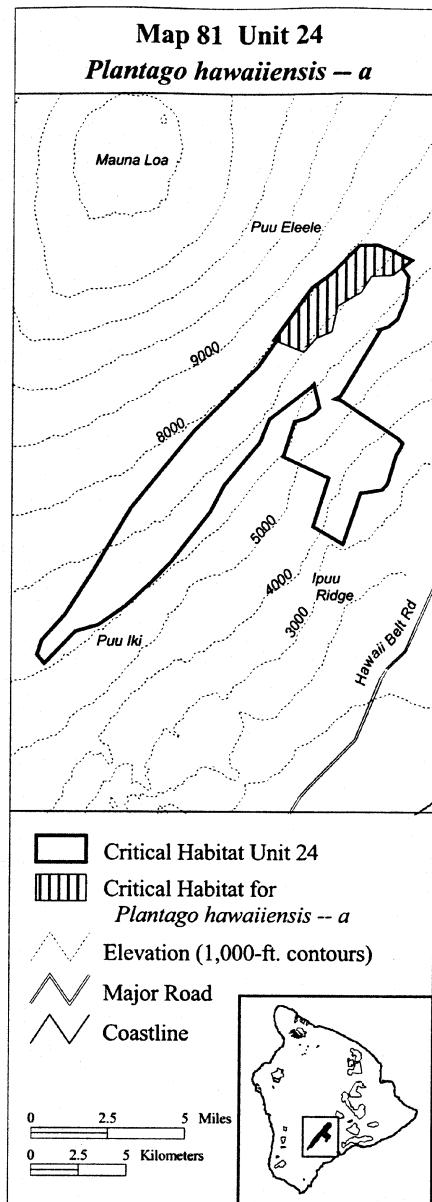
(i) Unit consists of the following 14 boundary points: Start at 239891, 2150141; 240843, 2150153; 241675, 2149824; 242668, 2149348; 241709, 2148593; 240533, 2148496; 240027, 2147666; 238765, 2146944;

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238485, 2145606; 237676, 2145240; 237021, 2144491; 235459, 2145119; 237410, 2147869; 238480, 2148664; return to starting point.

(ii) NOTE: Map 81 follows:



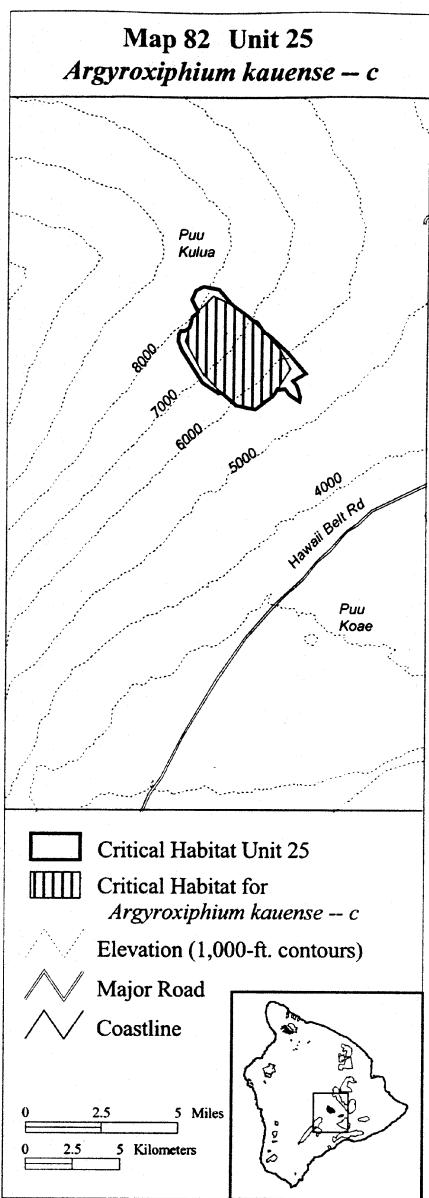
(82) Hawaii 25—*Argyroxiphium kauense*—c (2,006 ha, 4,957 ac)

(i) Unit consists of the following 13 boundary points: Start at 250289, 2157327; 251003, 2156578; 251595, 2155516; 250654, 2154088; 249731, 2153374; 248704, 2153565; 247907, 2154271; 246893, 2155307; 245987, 2156978; 246353, 2158267; 247468, 2159347; 248478, 2158877; 249279, 2158302; return to starting point.

(ii) NOTE: Map 82 follows:

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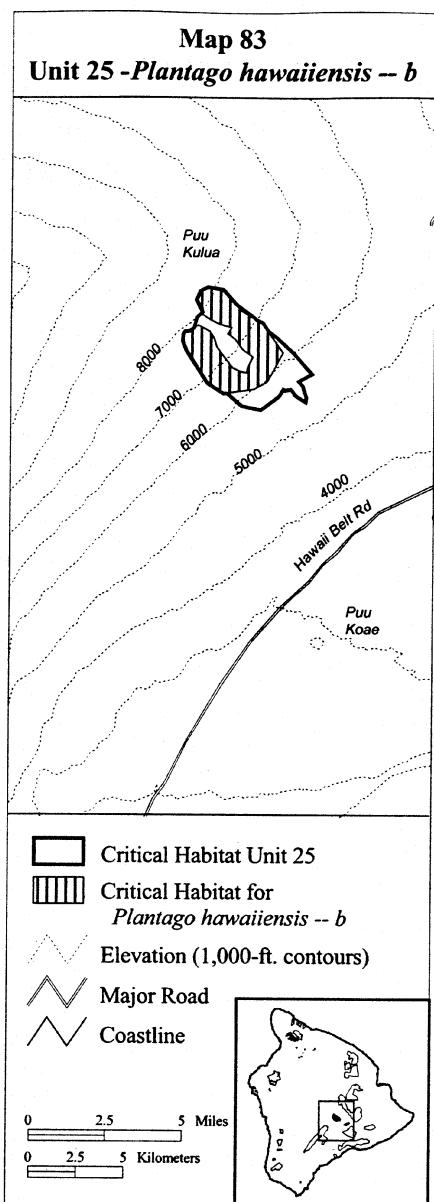


(83) Hawaii 25—*Plantago hawaiensis*—b  
 (1,522 ha, 3,762 ac)

(i) Unit consists of the following 35 boundary points: Start at 250884, 2156394; 250042, 2154844; 249371, 2154454; 247769, 2154222; 246915, 2154794; 245791,

2156465; 245586, 2156984; 245636, 2157360; 245710, 2157517; 245929, 2157517; 246442, 2157846; 247040, 2157529; 247235, 2157212; 247369, 2156711; 247784, 2156175; 248224, 2155589; 248639, 2155406; 248980, 2155320; 249005, 2155564; 249285, 2156187; 248773, 2156528; 248358, 2157090; 247967, 2157383; 248175, 2157737; 247528, 2157895; 246991, 2158164; 246649, 2158418; 246674, 2158444; 246320, 2159164; 246527, 2159640; 246918, 2159860; 247369, 2159775; 247723, 2159701; 248761, 2158530; 249786, 2157944; return to starting point.

(ii) NOTE: Map 83 follows:



(84) Hawaii 25—*Silene hawaiiensis*—a  
 (854 ha, 2,110 ac)

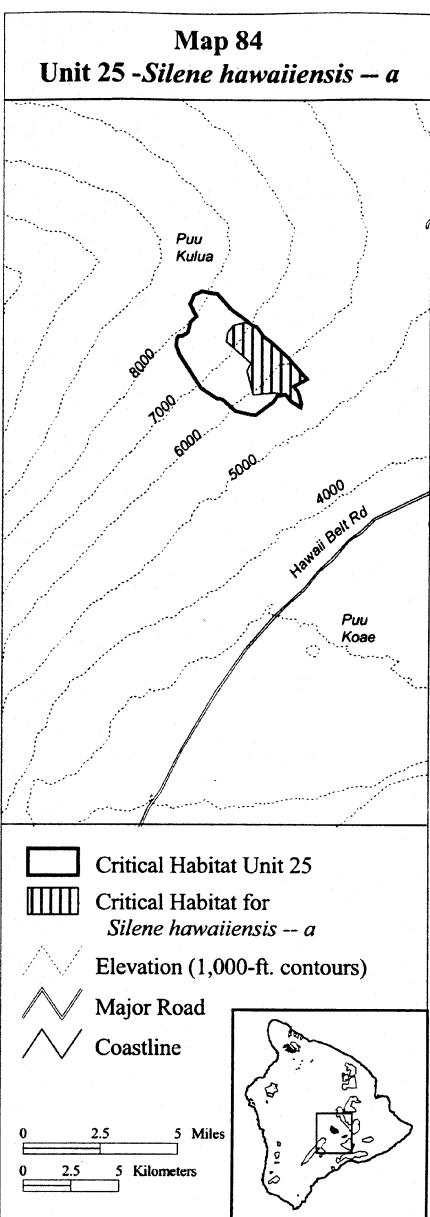
(i) Unit consists of the following 20 boundary points: Start at 249605, 2154443; 249282, 2155670; 249489, 2156083; 248205, 2157211; 248257, 2157694; 248587,

2158073; 249179, 2158214; 249790, 2157993; 250127, 2157482; 250559, 2157202; 251403, 2156390; 252371, 2155266; 251701, 2154870; 251902, 2154637; 252099, 2154017; 252071, 2153773; 251517, 2154149; 251301, 2154449; 250993, 2154406; 250728, 2154562; return to starting point.

(ii) NOTE: Map 84 follows:

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(85) Hawaii 26—*Hibiscadelphus giffardianus*—a (149 ha, 367 ac)

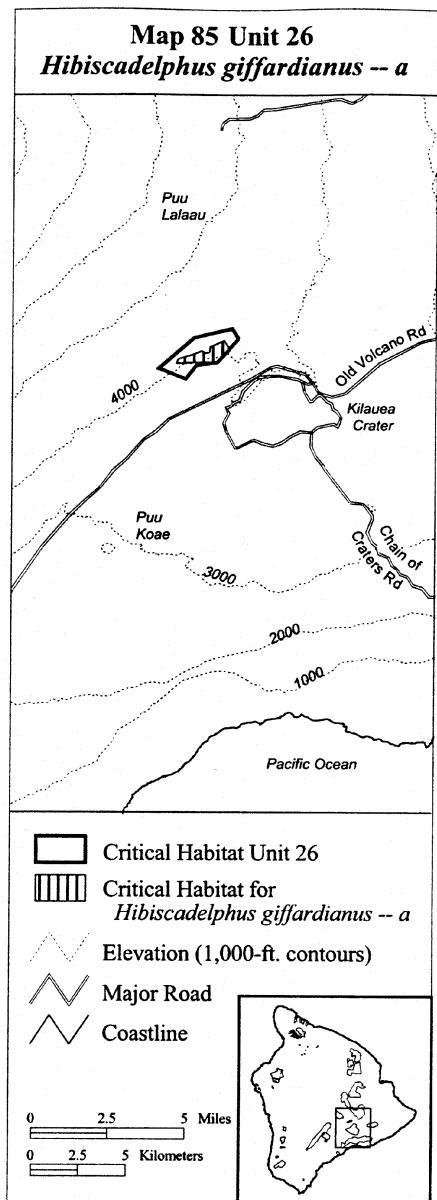
(i) Unit consists of the following 18 boundary points: Start at 256349, 2151035; 256516, 2151138; 256717, 2151196;

257064, 2151279; 257624, 2151506; 257795, 2151400; 258009, 2151416; 258048, 2151718; 258777, 2152045; 258966, 2151770; 259051, 2151582; 258433, 2150898; 258430, 2150898; 257945, 2150909; 257790, 2150915; 257034, 2150898; 256769, 2150857; 256333, 2150857; return to starting point.

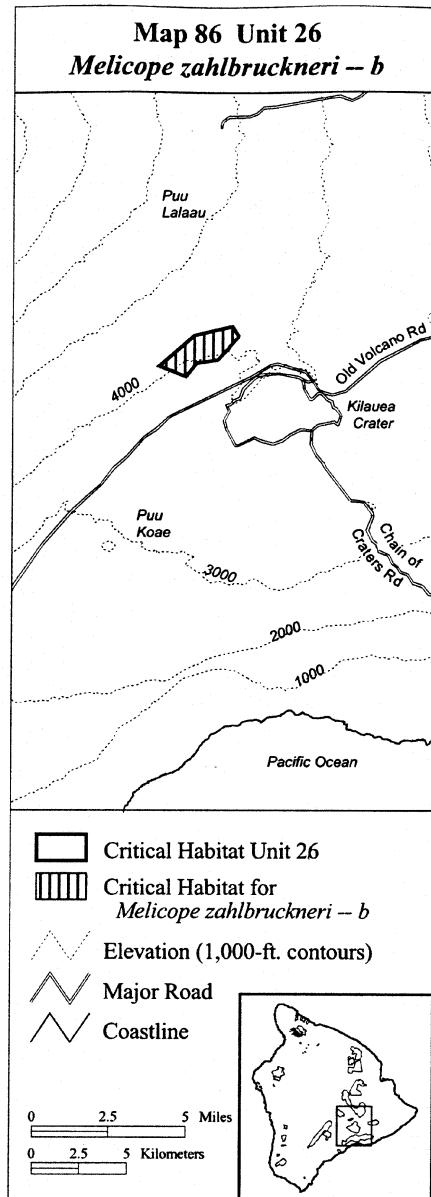
(ii) NOTE: Map 85 follows:

2152206; 259198, 2152680; return to starting point.

(ii) NOTE: Map 86 follows:



(86) Hawaii 26—*Melicope zahlbruckneri*—b (495 ha, 1,224 ac)



(i) Unit consists of the following seven boundary points: Start at 259520, 2152124; 258420, 2150913; 257324, 2150755; 256781, 2150023; 255379, 2150583; 257220,

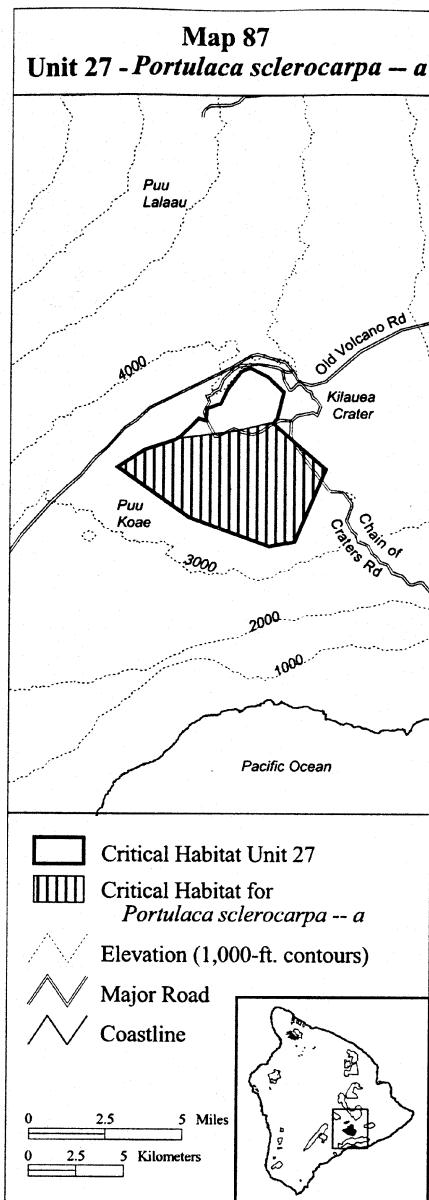
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(87) Hawaii 27—*Portulaca sclerocarpa*—a  
(4,390 ha, 10,848 ac)

(i) Unit consists of the following nine boundary points: Start at 263596, 2140748; 262234, 2140517; 258055, 2142041; 254269, 2144742; 255668, 2145679; 257593, 2146289; 260387, 2146659; 262395, 2147120; 265212, 2144650; return to starting point.

(ii) NOTE: Map 87 follows:



(88) Hawaii 27—*Silene hawaiiensis*—b  
(1,942 ha, 4,798 ac)

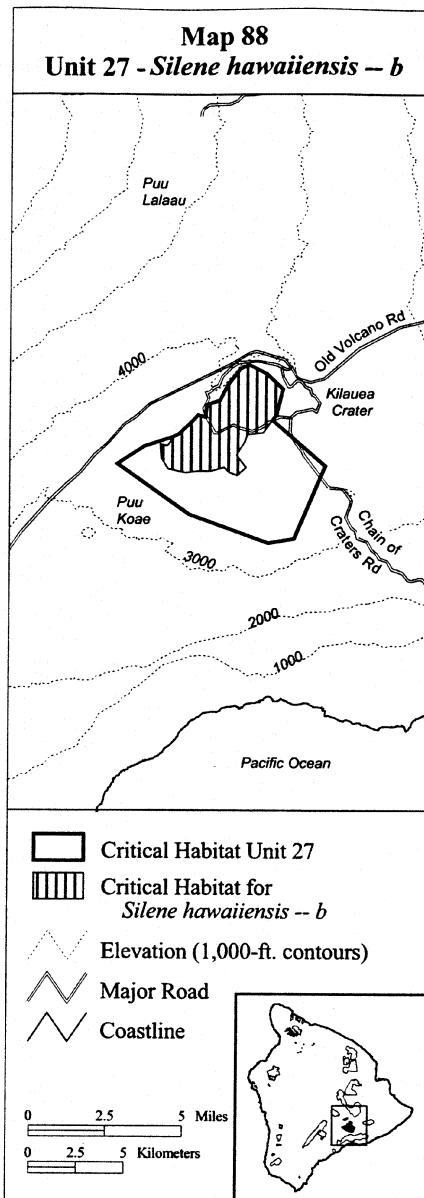
(i) Unit consists of the following 28 boundary points: Start at 261207, 2150002; 262152, 2149529; 262966, 2148732; 262640, 2147357; 261953, 2146398; 261102,

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2146308; 260976, 2145910; 260541, 2145204; 261048, 2144534; 260596, 2144100; 260125, 2144299; 259890, 2144552; 259220, 2144335; 258515, 2144335; 257845, 2144263; 256922, 2144462; 256560, 2145059; 256506, 2145801; 256886, 2145710; 257239, 2146201; 257501, 2146344; 258279, 2147086; 258496, 2147337; 258877, 2147212; 258949, 2147864; 259637, 2148117; 260035, 2148895; 260704, 2149800; return to starting point.

(ii) NOTE: Map 88 follows:



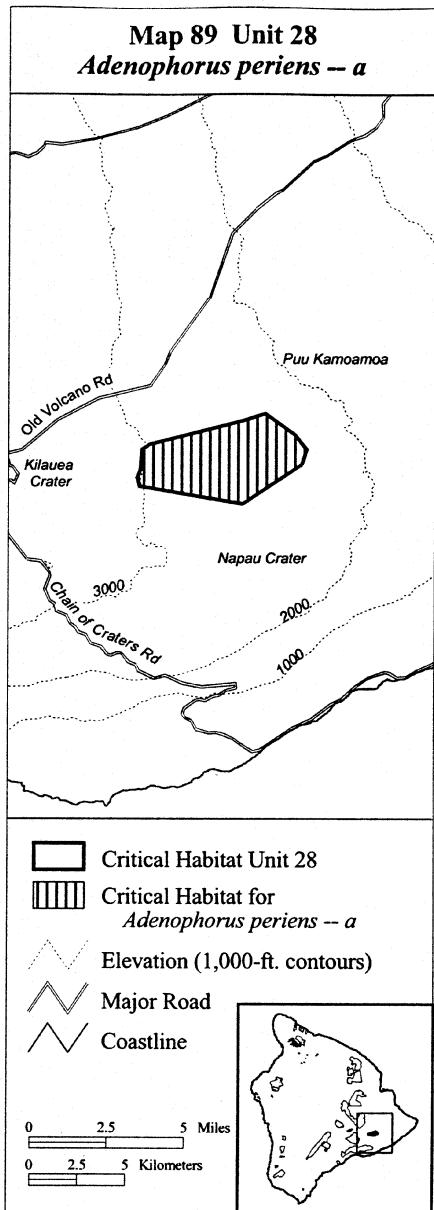
(89) Hawaii 28—*Adenophorus periens*—a  
(2,733 ha, 6,754 ac)

(i) Unit consists of the following 11 boundary points: Start at 279712, 2148510; 276648, 2146439; 271250, 2147346; 271140, 2147797; 271319, 2148257; 271361,

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2149267; 271770, 2149568; 276751, 2150845; 277839, 2151215; 279362, 2150061; 279952, 2149315; return to starting point.

(ii) NOTE: Map 89 follows:

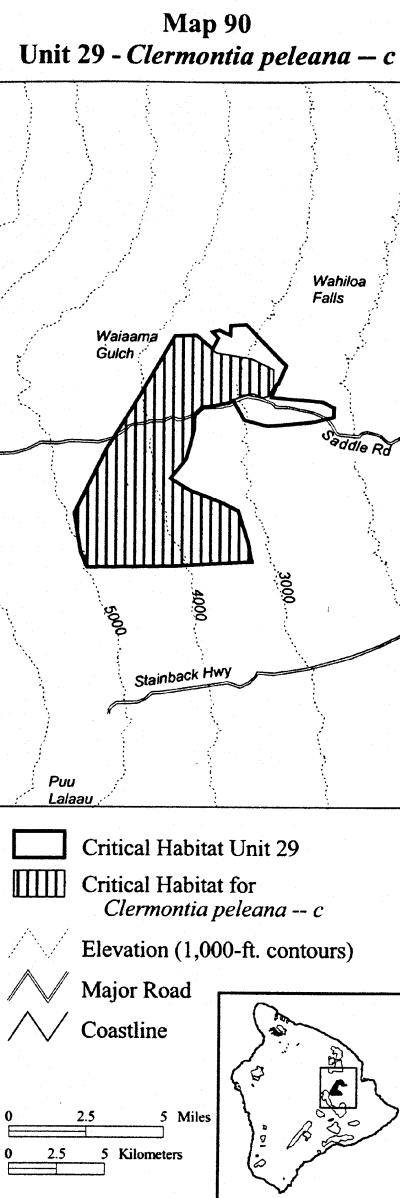


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(90) Hawaii 29—*Clermontia peleana*—c  
(6,845 ha, 16,914 ac)

(i) Unit consists of the following 29 boundary points: Start at 256704, 2173629; 258341, 2177012; 260142, 2179904; 261881, 2182923; 262993, 2182963; 264053, 2182050; 265872, 2181759; 266999, 2181195; 267018, 2180286; 266781, 2179777; 266454, 2179686; 265993, 2179903; 265443, 2179855; 264701, 2179425; 264030, 2179281; 263288, 2179209; 262953, 2178826; 262905, 2178084; 262761, 2177461; 262498, 2176480; 261708, 2175450; 262666, 2174828; 264380, 2174192; 265235, 2173756; 265744, 2172137; 265944, 2171082; 261670, 2170827; 257377, 2170773; 257013, 2171646; return to starting point.

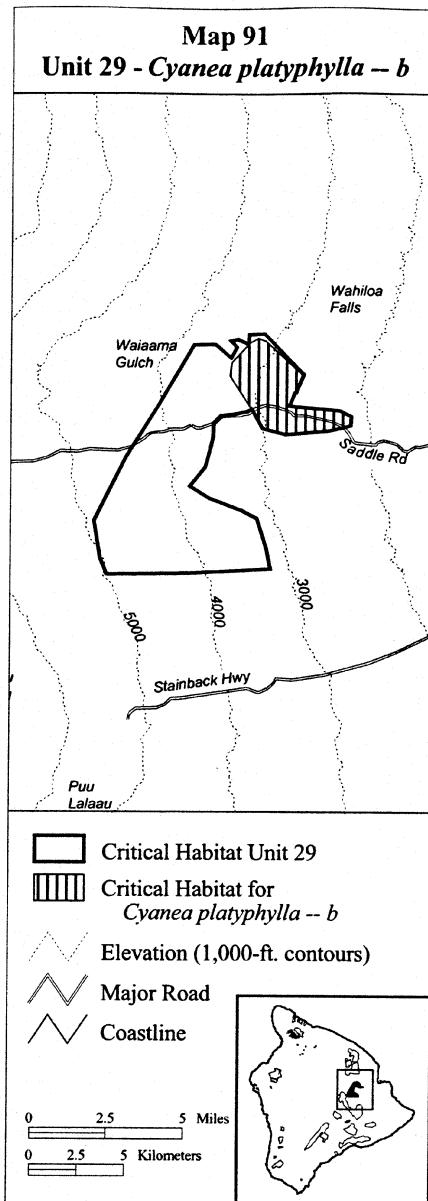
(ii) NOTE: Map 90 follows:

(91) Hawaii 29—*Cyanea platyphylla*—b  
(1,524 ha, 3,767 ac)

(i) Unit consists of the following 15 boundary points: Start at 270137, 2179182; 270117, 2178705; 269049, 2178426; 266707, 2178218; 265505, 2178550; 264852,

2179669; 264237, 2180565; 263774, 2181296; 263878, 2181980; 264821, 2183016; 265256, 2183296; 265629, 2183151; 267567, 2181379; 266904, 2179742; 269567, 2179503; return to starting point.

(ii) NOTE: Map 91 follows:



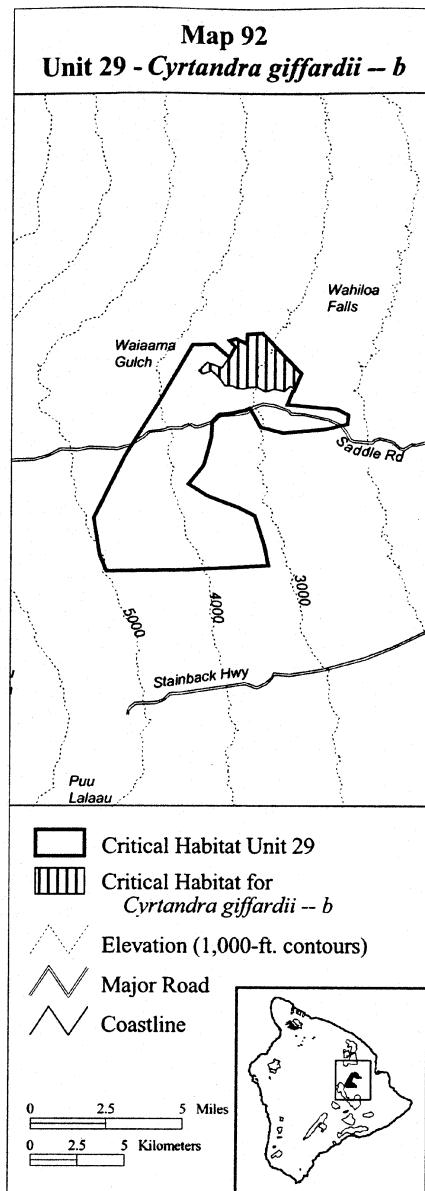
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(92) Hawaii 29—*Cyrtandra giffardii*—b  
(938 ha, 2,319 ac)

(i) Unit consists of the following 28 boundary points: Start at 262416, 2181378; 262234, 2181545; 262682, 2181990; 263440, 2181695; 263960, 2182446; 264133, 2182822; 263843, 2183142; 264177, 2183241; 264755, 2182952; 264784, 2183472; 265594, 2183524; 267656, 2181395; 267302, 2180559; 267067, 2180712; 266763, 2180438; 266546, 2180496; 266214, 2180553; 265752, 2180423; 265275, 2180683; 264856, 2180640; 264596, 2180553; 264191, 2180611; 264018, 2180727; 263642, 2180727; 263367, 2181102; 263122, 2181334; 262891, 2181536; 262486, 2181377; return to starting point.

(ii) NOTE: Map 92 follows:



(93) Hawaii 29—*Cyrtandra tintinnabula*—b (378 ha, 934 ac)

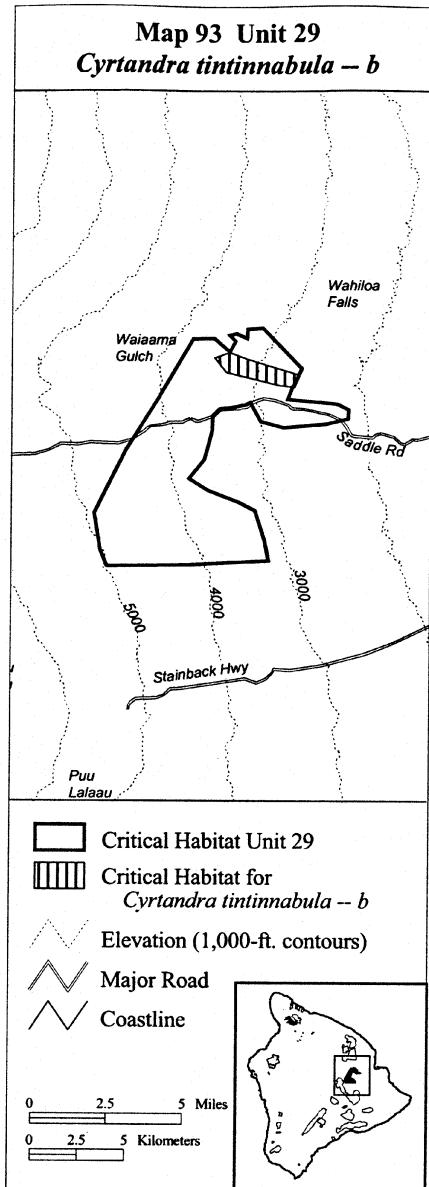
(i) Unit consists of the following eight boundary points: Start at 267234, 2180396; 266451, 2180468; 263662, 2181160; 263032, 2181914; 263831, 2182224; 264610,

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2181934; 265290, 2181716; 267462, 2181056;  
return to starting point.

(ii) NOTE: Map 93 follows:



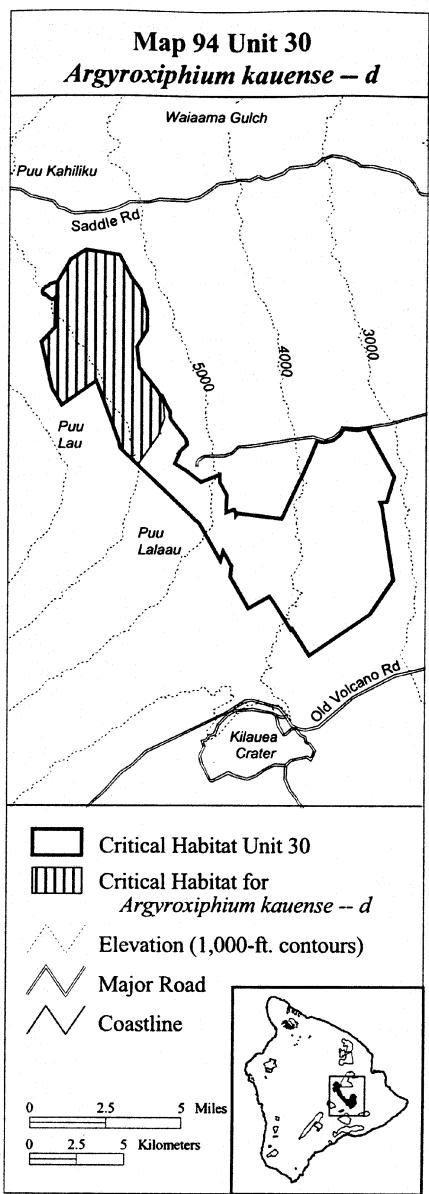
(94) Hawaii 30—*Argyroxiphium kauense*—  
d (4,281 ha, 10,578 ac)

(i) Unit consists of the following 35 boundary points: Start at 251376, 2166456; 250829, 2167375; 250254, 2169847; 250992, 2170628; 251020, 2172877; 251769, 2174236; 252605, 2174758; 254398, 2174497; 255008, 2173313; 255513, 2172668; 255879, 2171502; 255879, 2170492; 255339, 2169604; 255451, 2168509; 256441, 2167275; 256753, 2166610; 256810, 2165770; 256453, 2164780; 255495, 2163352; 255306, 2163361; 254541, 2164098; 254498, 2164137; 254481, 2164182; 254455, 2164255; 254449, 2164271; 254374, 2164589; 254004, 2165599; 253287, 2167525; 253238, 2167661; 253194, 2167785; 253194, 2167786; 253193, 2167786; 253192, 2167786; 253191, 2167786; 253146, 2167752; return to starting point.

(ii) NOTE: Map 94 follows:

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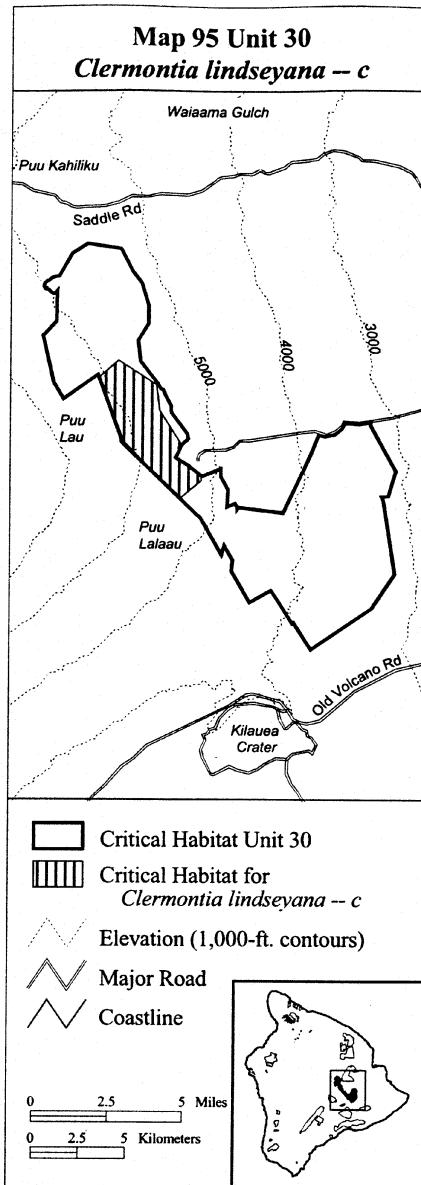


(95) Hawaii 30—*Clermontia lindseyana*—c  
(1,634 ha, 4,037 ac)

(i) Unit consists of the following 13 boundary points: Start at 254584, 2164181; 253305, 2167650; 254302, 2168554; 256320, 2167251; 256487, 2165898; 257687,

2164037; 257302, 2163331; 258133, 2162854; 258725, 2162386; 258756, 2162085; 257655, 2161172; 256263, 2162480; 255102, 2163686; return to starting point.

(ii) NOTE: Map 95 follows:



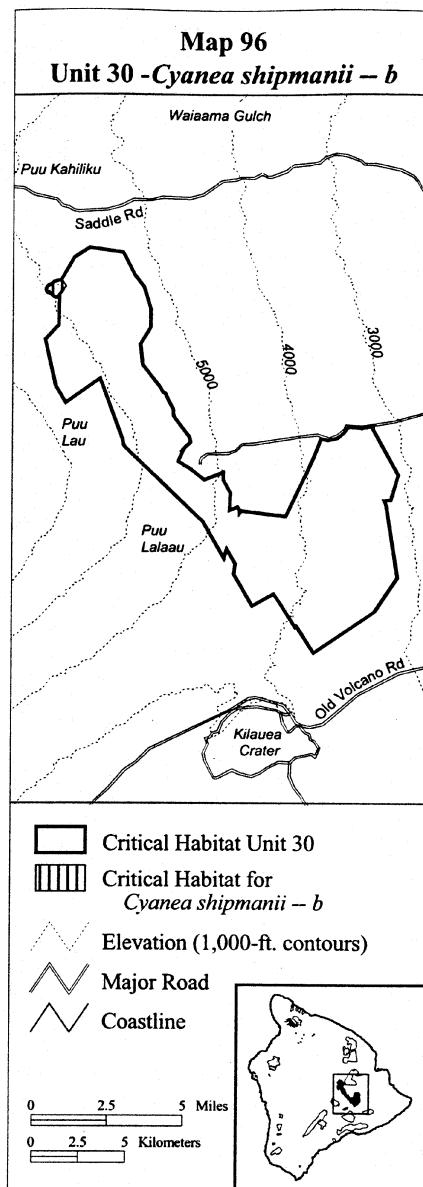
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(96) Hawaii 30—*Cyanea shipmanii*—b (62 ha, 152 ac)

(i) Unit consists of the following 17 boundary points: Start at 250385, 2172716; 250588, 2172812; 250726, 2172919; 250993, 2173015; 251162, 2173040; 251356, 2172692; 251292, 2172620; 251217, 2172460; 251121, 2172321; 251014, 2172236; 250918, 2172140; 250790, 2172086; 250673, 2172161; 250545, 2172300; 250385, 2172332; 250300, 2172449; 250310, 2172535; return to starting point.

(ii) NOTE: Map 96 follows:



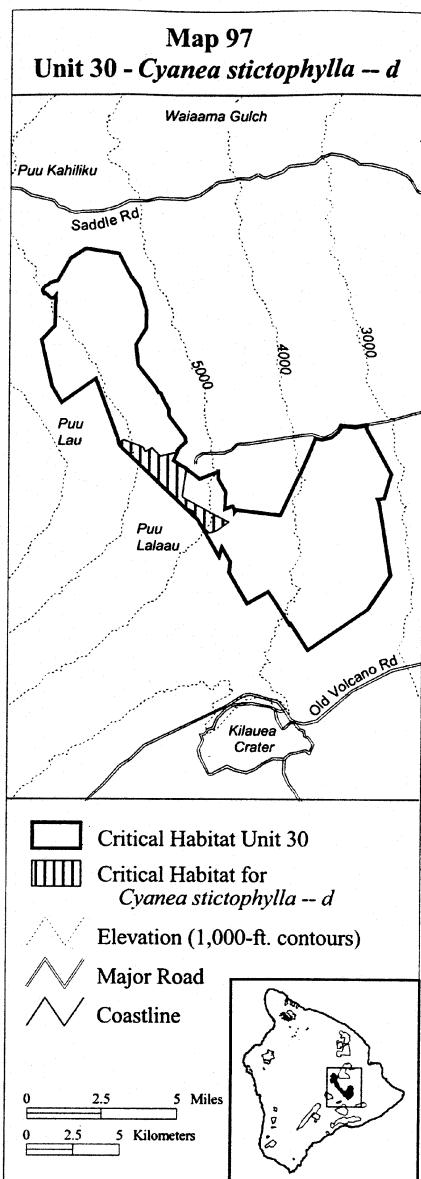
(97) Hawaii 30—*Cyanea shipmanii*—c (825 ha, 2,038 ac)

(i) Unit consists of the following 17 boundary points: Start at 254374, 2164589; 254004, 2165599; 253236, 2167756; 253128, 2168010; 254193, 2168432; 254246,

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2168296; 254470, 2167400; 254649, 2167176; 255481, 2167289; 256666, 2167013; 256799, 2166728; 257113, 2166101; 257113, 2164936; 256396, 2164757; 255321, 2165116; 254559, 2165295; 254649, 2164623; return to starting point.

(ii) NOTE: Map 97 follows:

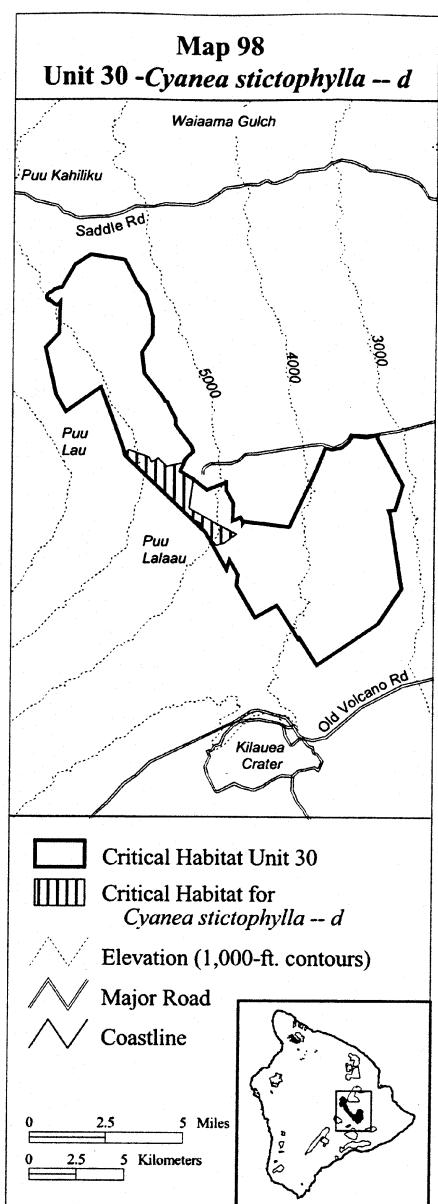


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(98) Hawaii 30—*Cyanea stictophylla*—d  
(623 ha, 1,539 ac)

(i) Unit consists of the following 27 boundary points: Start at 254498, 2164341; 254727, 2164444; 255743, 2164078; 255868, 2163816; 256222, 2164021; 256656, 2163576; 257560, 2163785; 257352, 2163331; 258066, 2162902; 257844, 2161395; 257900, 2161317; 259249, 2160573; 260356, 2159979; 259695, 2159517; 259319, 2159380; 258898, 2159773; 258849, 2159861; 258810, 2159929; 258784, 2159981; 258755, 2160036; 258715, 2160077; 258688, 2160104; 258437, 2160584; 258243, 2160676; 258167, 2160673; 256128, 2162630; 254574, 2164116; return to starting point.

(ii) NOTE: Map 98 follows:



(99) Hawaii 30—*Cyrtandra giffardii*—c  
 (3,872 ha, 9,567 ac)

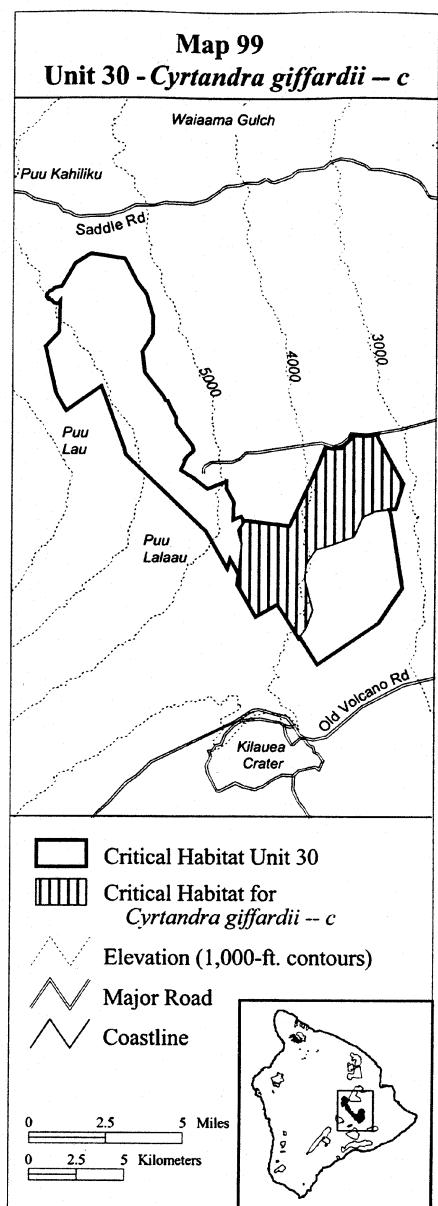
(i) Unit consists of the following 28 boundary points: Start at 266492, 2165136; 267184, 2165097; 267638, 2165195; 269069, 2162612; 268669, 2161281; 267615,

2161161; 266924, 2160825; 266490, 2159798; 265048, 2159265; 264495, 2159127; 264001, 2158357; 263902, 2157567; 264357, 2155927; 263981, 2154960; 263634, 2154426; 262793, 2155728; 262477, 2156217; 261337, 2155564; 260360, 2157263; 260584, 2159423; 260367, 2160114; 260734, 2160659; 263088, 2160361; 264090, 2162500; 264176, 2162638; 264221, 2162790; 264951, 2164464; 265860, 2164445; return to starting point.

(ii) NOTE: Map 99 follows:

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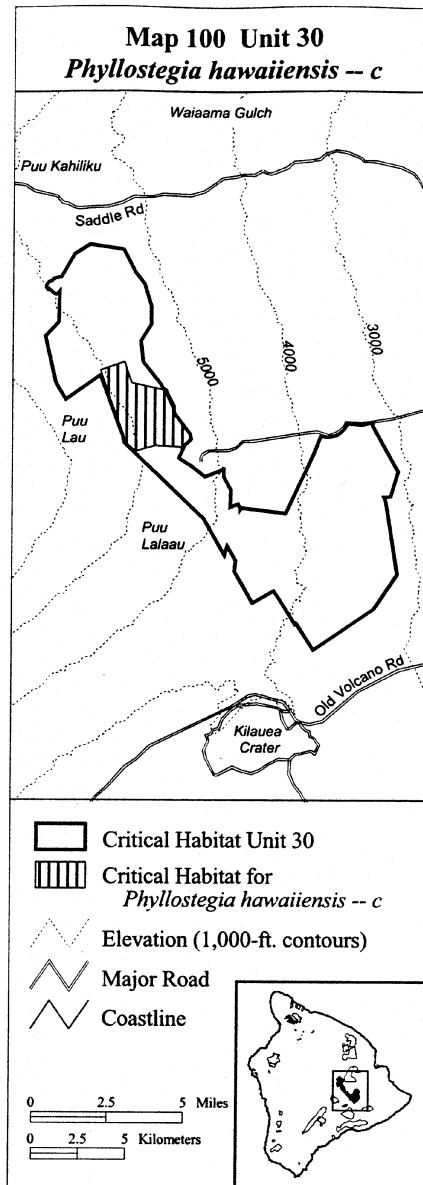


(100) Hawaii 30—*Phyllostegia racemosa*—c (267 ha, 659 ac)

(i) Unit consists of the following 10 boundary points: Start at 255001, 2163655; 256020, 2163968; 257634, 2163912; 257384, 2163319; 257871, 2163010; 257756,

2162804; 256542, 2162680; 256379, 2162447; 256238, 2162463; 256081, 2162615; return to starting point.

(ii) NOTE: Map 100 follows:



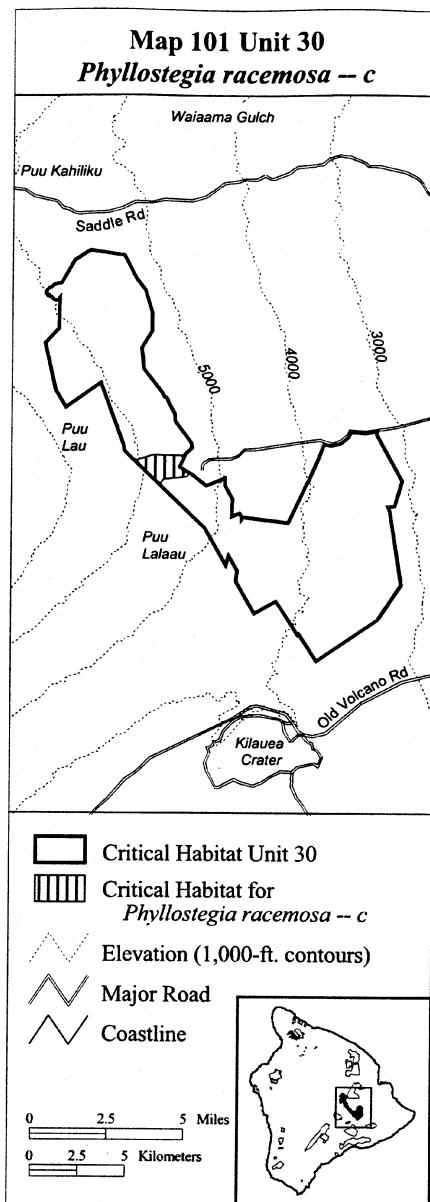
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- (101) Hawaii 30—*Phyllostegia velutina*—b  
 (1,180 ha, 2,916 ac)

(i) Unit consists of the following 25 boundary points: Start at 255001, 2163655; 256020, 2163968; 257556, 2163812; 257342, 2163356; 258145, 2162834; 258761, 2162325; 259766, 2162727; 259792, 2162339; 260155, 2161636; 260142, 2160687; 260553, 2160880; 260676, 2160624; 260669, 2159628; 260010, 2158695; 259835, 2158111; 258895, 2159775; 258845, 2159864; 258808, 2159929; 258780, 2159981; 258748, 2160040; 258707, 2160080; 258644, 2160142; 258562, 2160221; 258544, 2160239; 256081, 2162615; return to starting point.

(ii) NOTE: Map 101 follows:



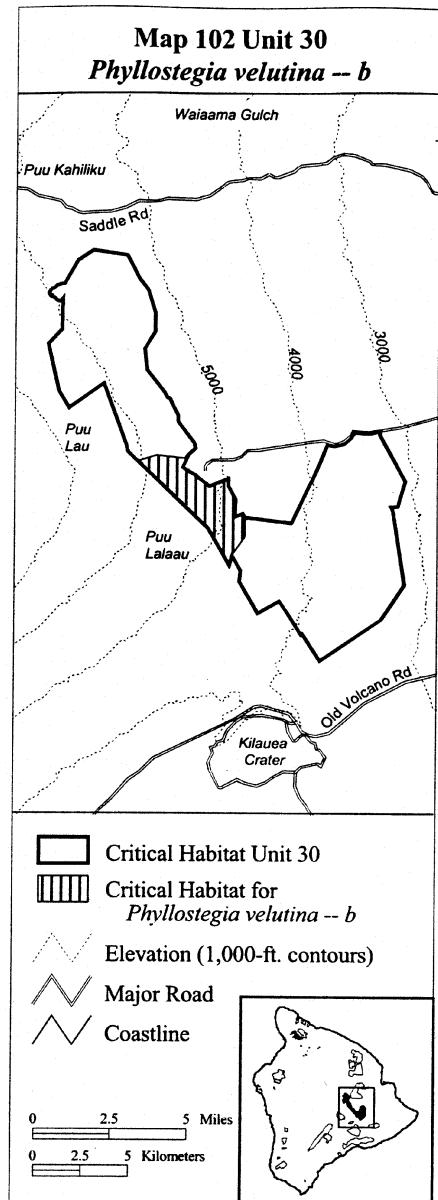
- (102) Hawaii 30—*Plantago hawaiensis*—c  
 (1,219 ha, 3,012 ac)

(i) Unit consists of the following 13 boundary points: Start at 254476, 2168522; 254473, 2168510; 254874, 2167383; 256572, 2166997; 257174, 2165685; 257971,

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2164620; 258044, 2164337; 257576, 2163925; 256125, 2164018; 255434, 2163788; 255099, 2163685; 254488, 2164250; 253207, 2168032; return to starting point.

(ii) NOTE: Map 102 follows:



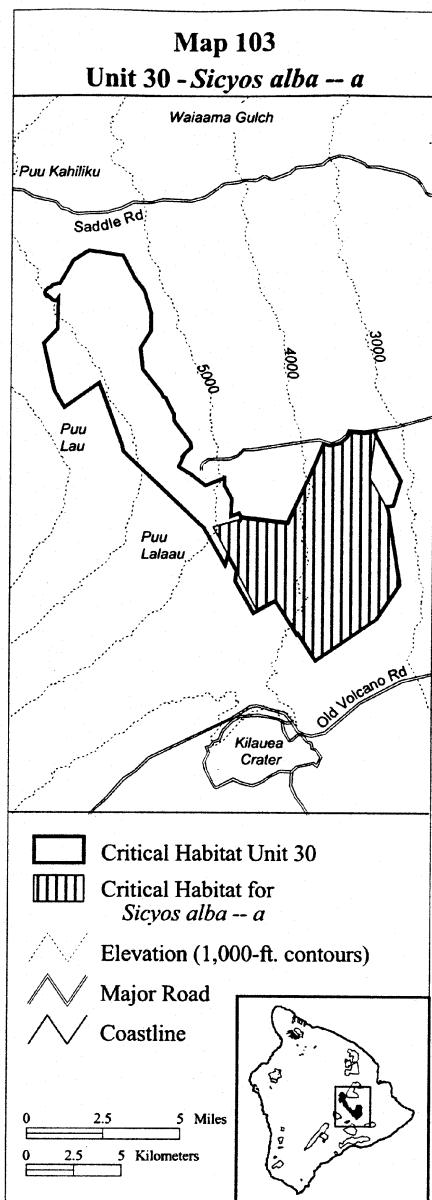
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(103) Hawaii 30—*Sicyos alba*—a (6,266 ha, 15,483 ac)

(i) Unit consists of the following 18 boundary points: Start at 266388, 2165221; 267132, 2165147; 267709, 2165277; 267412, 2162783; 268417, 2161049; 269013, 2157105; 267821, 2155262; 264606, 2153076; 262507, 2156298; 261492, 2155783; 259208, 2160114; 260710, 2160549; 263148, 2160288; 264210, 2162671; 264954, 2164570; 265289, 2164477; 265811, 2164588; 266183, 2164886; return to starting point.

(ii) NOTE: Map 103 follows:

(104) Table of Protected Species Within Each Critical Habitat Unit for the Island of Hawaii



Unit name	Species occupied	Species unoccupied
Hawaii 9— <i>Achyranthes mutica</i> —a .....	.....	<i>Achyranthes mutica</i> .
Hawaii 9— <i>Achyranthes mutica</i> —b .....	<i>Achyranthes mutica</i> .	
Hawaii 9— <i>Achyranthes mutica</i> —c .....	.....	<i>Achyranthes mutica</i> .
Hawaii 9— <i>Achyranthes mutica</i> —d .....	.....	<i>Achyranthes mutica</i> .
Hawaii 9— <i>Achyranthes mutica</i> —e .....	.....	<i>Achyranthes mutica</i> .
Hawaii 9— <i>Achyranthes mutica</i> —f .....	.....	<i>Achyranthes mutica</i> .

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Unit name	Species occupied	Species unoccupied
Hawaii 9— <i>Achyranthes mutica</i> —g .....	.....	<i>Achyranthes mutica.</i>
Hawaii 9— <i>Achyranthes mutica</i> —h .....	.....	<i>Achyranthes mutica.</i>
Hawaii 9— <i>Achyranthes mutica</i> —i .....	.....	<i>Achyranthes mutica.</i>
Hawaii 9— <i>Achyranthes mutica</i> —j .....	.....	<i>Achyranthes mutica.</i>
Hawaii 28— <i>Adenophorus perakensis</i> —a .....	<i>Adenophorus perakensis.</i>	
Hawaii 10— <i>Argyroxiphium kauense</i> —a .....	.....	<i>Argyroxiphium kauense.</i>
Hawaii 24— <i>Argyroxiphium kauense</i> —b .....	.....	<i>Argyroxiphium kauense.</i>
Hawaii 25— <i>Argyroxiphium kauense</i> —c .....	.....	<i>Argyroxiphium kauense.</i>
Hawaii 30— <i>Argyroxiphium kauense</i> —d .....	.....	<i>Argyroxiphium kauense.</i>
Hawaii 24— <i>Asplenium fragile</i> var. <i>insulare</i> —a .....	<i>Asplenium fragile</i> var. <i>insulare</i> .	
Hawaii 10— <i>Bonamia menziesii</i> —a .....	.....	<i>Bonamia menziesii.</i>
Hawaii 8— <i>Clermontia drepanomorpha</i> —a .....	.....	
Hawaii 1— <i>Clermontia lindseyana</i> —a .....	.....	
Hawaii 2— <i>Clermontia lindseyana</i> —b .....	.....	
Hawaii 30— <i>Clermontia lindseyana</i> —c .....	.....	
Hawaii 1— <i>Clermontia peleana</i> —a .....	.....	
Hawaii 3— <i>Clermontia peleana</i> —b .....	.....	
Hawaii 29— <i>Clermontia peleana</i> —c .....	.....	
Hawaii 1— <i>Clermontia pyrularia</i> —a .....	.....	<i>Clermontia pyrularia.</i>
Hawaii 2— <i>Clermontia pyrularia</i> —b .....	.....	
Hawaii 10— <i>Colubrina oppositifolia</i> —a .....	.....	<i>Colubrina oppositifolia.</i>
Hawaii 18— <i>Colubrina oppositifolia</i> —b .....	.....	<i>Colubrina oppositifolia.</i>
Hawaii 11— <i>Cyanea hamatiformis</i> ssp. <i>carlsonii</i> —a .....	.....	<i>Cyanea hamatiformis</i> ssp. <i>carlsonii</i> .
Hawaii 14— <i>Cyanea hamatiformis</i> ssp. <i>carlsonii</i> —b .....	.....	<i>Cyanea hamatiformis</i> ssp. <i>carlsonii</i> .
Hawaii 15— <i>Cyanea hamatiformis</i> ssp. <i>carlsonii</i> —c .....	.....	<i>Cyanea hamatiformis</i> ssp. <i>carlsonii</i> .
Hawaii 16— <i>Cyanea hamatiformis</i> ssp. <i>carlsonii</i> —d .....	.....	<i>Cyanea hamatiformis</i> ssp. <i>carlsonii</i> .
Hawaii 3— <i>Cyanea platyphylla</i> —a .....	.....	
Hawaii 29— <i>Cyanea platyphylla</i> —b .....	.....	
Hawaii 1— <i>Cyanea shipmanii</i> —a .....	.....	
Hawaii 30— <i>Cyanea shipmanii</i> —b .....	.....	
Hawaii 30— <i>Cyanea shipmanii</i> —c .....	.....	
Hawaii 15— <i>Cyanea stictophylla</i> —a .....	.....	
Hawaii 16— <i>Cyanea stictophylla</i> —b .....	.....	
Hawaii 24— <i>Cyanea stictophylla</i> —c .....	.....	
Hawaii 30— <i>Cyanea stictophylla</i> —d .....	.....	
Hawaii 3— <i>Cyrtandra giffardii</i> —a .....	.....	
Hawaii 29— <i>Cyrtandra giffardii</i> —b .....	.....	
Hawaii 30— <i>Cyrtandra giffardii</i> —c .....	.....	
Hawaii 3— <i>Cyrtandra tintinnabula</i> —a .....	.....	
Hawaii 29— <i>Cyrtandra tintinnabula</i> —b .....	.....	
Hawaii 10— <i>Delissea undulata</i> —a .....	.....	
Hawaii 10— <i>Delissea undulata</i> —b .....	.....	
Hawaii 17— <i>Diellia erecta</i> —a .....	.....	
Hawaii 18— <i>Diellia erecta</i> —b .....	.....	
Hawaii 17— <i>Flueggea neowawraea</i> —a .....	.....	
Hawaii 18— <i>Flueggea neowawraea</i> —b .....	.....	
Hawaii 18— <i>Gouania vitifolia</i> —a .....	.....	
Hawaii 26— <i>Hibiscadelphus giffardianus</i> —a .....	.....	
Hawaii 10— <i>Hibiscadelphus hualalaiensis</i> —a .....	.....	
Hawaii 10— <i>Hibiscus brackenridgei</i> —a .....	.....	
Hawaii 21— <i>Ischaemum byrone</i> —a .....	.....	
Hawaii 22— <i>Ischaemum byrone</i> —b .....	.....	
Hawaii 4— <i>Isodendrion hosakae</i> —a .....	.....	
Hawaii 4— <i>Isodendrion hosakae</i> —b .....	.....	
Hawaii 4— <i>Isodendrion hosakae</i> —c .....	.....	
Hawaii 4— <i>Isodendrion hosakae</i> —d .....	.....	
Hawaii 4— <i>Isodendrion hosakae</i> —e .....	.....	
Hawaii 4— <i>Isodendrion hosakae</i> —f .....	.....	
Hawaii 19— <i>Mariscus fauriei</i> —a .....	.....	
Hawaii 24— <i>Melicope zahlbruckneri</i> —a .....	.....	
Hawaii 26— <i>Melicope zahlbruckneri</i> —b .....	.....	
Hawaii 10— <i>Neraudia ovata</i> —a .....	.....	
Hawaii 18— <i>Neraudia ovata</i> —d .....	.....	
Hawaii 5— <i>Nothocestrum breviflorum</i> —a .....	.....	
Hawaii 6— <i>Nothocestrum breviflorum</i> —b .....	.....	
Hawaii 10— <i>Nothocestrum breviflorum</i> —c .....	.....	
Hawaii 1— <i>Phyllostegia racemosa</i> —a .....	.....	

Unit name	Species occupied	Species unoccupied
Hawaii 2— <i>Phyllostegia racemosa</i> —b .....	<i>Phyllostegia racemosa</i> .	
Hawaii 30— <i>Phyllostegia racemosa</i> —c .....		<i>Phyllostegia racemosa</i> .
Hawaii 24— <i>Phyllostegia velutina</i> —a .....	<i>Phyllostegia velutina</i> .	
Hawaii 30— <i>Phyllostegia velutina</i> —b .....	<i>Phyllostegia velutina</i> .	
Hawaii 3— <i>Phyllostegia warshaweri</i> —a .....	<i>Phyllostegia warshaweri</i> .	
Hawaii 8— <i>Phyllostegia warshaweri</i> —b .....	<i>Phyllostegia warshaweri</i> .	
Hawaii 24— <i>Plantago hawaiensis</i> —a .....	<i>Plantago hawaiensis</i> .	
Hawaii 25— <i>Plantago hawaiensis</i> —b .....	<i>Plantago hawaiensis</i> .	
Hawaii 30— <i>Plantago hawaiensis</i> —c .....	<i>Plantago hawaiensis</i> .	
Hawaii 7— <i>Pleomele hawaiensis</i> —a .....	<i>Pleomele hawaiensis</i> .	
Hawaii 10— <i>Pleomele hawaiensis</i> —b .....	<i>Pleomele hawaiensis</i> .	
Hawaii 18— <i>Pleomele hawaiensis</i> —c .....	<i>Pleomele hawaiensis</i> .	
Hawaii 23— <i>Pleomele hawaiensis</i> —d .....	<i>Pleomele hawaiensis</i> .	
Hawaii 27— <i>Portulaca sclerocarpa</i> —a .....	<i>Portulaca sclerocarpa</i> .	
Hawaii 20— <i>Sesbania tomentosa</i> —a .....	<i>Sesbania tomentosa</i> .	
Hawaii 23— <i>Sesbania tomentosa</i> —b .....	<i>Sesbania tomentosa</i> .	
Hawaii 30— <i>Sicyos alba</i> —a .....	<i>Sicyos alba</i> .	
Hawaii 25— <i>Silene hawaiensis</i> —a .....	<i>Silene hawaiensis</i> .	
Hawaii 27— <i>Silene hawaiensis</i> —b .....	<i>Silene hawaiensis</i> .	
Hawaii 10— <i>Solanum incompletum</i> —a .....		<i>Solanum incompletum</i> .
Hawaii 11— <i>Solanum incompletum</i> —b .....		<i>Solanum incompletum</i> .
Hawaii 4— <i>Vigna o-wahuensis</i> —a .....		<i>Vigna o-wahuensis</i> .
Hawaii 4— <i>Vigna o-wahuensis</i> —b .....		<i>Vigna o-wahuensis</i> .
Hawaii 4— <i>Vigna o-wahuensis</i> —c .....		<i>Vigna o-wahuensis</i> .
Hawaii 10— <i>Zanthoxylum dipetalum</i> ssp. <i>tomentosum</i> —a.	<i>Zanthoxylum dipetalum</i> ssp. <i>tomentosum</i> .	

(105) Critical habitat unit descriptions and maps, and a description of primary constituent elements, for Family Malvaceae: *Kokia drynarioides* on the island of Hawaii is provided in 50 CFR 17.96(a).

(1) *Plants on the island of Hawaii; Constituent elements.*

(1) *Flowering plants.*

FAMILY AMARANTHACEAE: ***Achyranthes mutica* (NCN)**

Hawaii 9—*Achyranthes mutica*—a, Hawaii 9—*Achyranthes mutica*—b, Hawaii 9—*Achyranthes mutica*—c, Hawaii 9—*Achyranthes mutica*—d, Hawaii 9—*Achyranthes mutica*—e, Hawaii 9—*Achyranthes mutica*—f, Hawaii 9—*Achyranthes mutica*—g, Hawaii 9—*Achyranthes mutica*—h, Hawaii 9—*Achyranthes mutica*—i, Hawaii 9—*Achyranthes mutica*—j, identified in the legal descriptions in paragraph (k) of this section, constitute critical habitat for *Achyranthes mutica* on Hawaii. Within these units, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

(i) *Acacia koaia* lowland dry forest, primarily in gulches but also in remnant stands of forest, and containing one or more of the following associated

native plant species: *Dodonaea viscosa*, *Erythrina sandwicensis*, *Metrosideros polymorpha*, *Myoporum sandwicense*, *Osteomeles anthyllidifolia*, *Nestegis sandwicensis*, *Santalum ellipticum*, or *Sophora chrysophylla*; and

(ii) Elevations between 646 and 1,509 m (2,120 and 4,949 ft).

FAMILY ASTERACEAE: ***Argyroxiphium kauense* (MAUNA LOA SILVERSWORD)**

Hawaii 10—*Argyroxiphium kauense*—a, Hawaii 24—*Argyroxiphium kauense*—b, Hawaii 25—*Argyroxiphium kauense*—c, and Hawaii 30—*Argyroxiphium kauense*—d, identified in the legal descriptions in paragraph (k) of this section, constitute critical habitat for *Argyroxiphium kauense* on Hawaii. Within these units, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

(i) Moist, open forest; subalpine mesic shrubland; bogs; and weathered, old pahoehoe (smooth) or aa (rough) lava with well-developed pockets of soil, and containing one or more of the following associated native plant species: *Asplenium peruvianum* var. *insulare*, *Carex alligata*, *Carex* sp., *Coprosma ernodeoides*, *Coprosma montana*, *Deschampsia nubigena*, *Dodonaea*

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*viscosa*, *Dubautia ciliolata*, *Gahnia gahniiformis*, *Geranium cuneatum*, *Leptecophylla tameiameiae*, *Metrosideros polymorpha*, *Plantago hawaiensis*, *Rhynchospora chinensis*, *Silene hawaiiensis*, or *Vaccinium reticulatum*; and

(ii) Elevations between 1,583 and 2,246 m (5,193 and 8,024 ft).

### FAMILY CAMPANULACEAE: *Clermontia drepanomorpha* (OHA WAI)

Hawaii 8—*Clermontia drepanomorpha*—a, identified in the legal description in paragraph (k) of this section, constitutes critical habitat for *Clermontia drepanomorpha* on Hawaii. Within this unit, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

(i) *Metrosideros polymorpha*, *Cheirodendron trigynum*, and *Cibotium glaucum* dominated montane wet forests, containing one or more of the following native plant species: *Astelia menziesiana*, *Carex alligata*, *Coprosma* sp., *Cyanea pilosa*, *Leptecophylla tameiameiae*, *Melicope clusiifolia*, and *Rubus hawaiiensis*, or sphagnum moss; and

(ii) Elevations between 1,106 and 1,676 m (3,627 and 5,459 ft).

### FAMILY CAMPANULACEAE: *Clermontia lindseyana* (OHA WAI)

Hawaii 1—*Clermontia lindseyana*—a, Hawaii 2—*Clermontia lindseyana*—b, and Hawaii 30—*Clermontia lindseyana*—c, identified in the legal descriptions in paragraph (k) of this section, constitute critical habitat for *Clermontia lindseyana* on Hawaii. Within these units, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

(i) Slightly open forest cover in wet and mesic *Metrosideros polymorpha*-*Acacia koa* forest, *M. polymorpha* forest, and mixed montane mesic *M. polymorpha*-*Acacia koa* forest and containing one or more of the following associated native plant species: *Athyrium* sp., *Cheirodendron trigynum*, *Coprosma* sp., *Leptecophylla tameiameiae*, *Peperomia* sp., or *Rubus hawaiiensis*; and

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(ii) Elevations between 1,495 and 1,953 m (4,906 and 6,407 ft).

### FAMILY CAMPANULACEAE: *Clermontia peleana* (OHA WAI)

Hawaii 1—*Clermontia peleana*—a, Hawaii 3—*Clermontia peleana*—b, and Hawaii 29—*Clermontia peleana*—c, identified in the legal descriptions in paragraph (k) of this section, constitute critical habitat for *Clermontia peleana* on Hawaii. Within these units, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

(i) Montane, wet *Metrosideros-Cibotium* forest containing one or more of the following associated native plant species: *Cheirodendron trigynum*, *Cibotium chamissoi*, *Cibotium menziesii*, *Clermontia hawaiiensis*, *Coprosma pubens*, *Cyrtandra platyphylla*, *Ilex anomala*, or *Sadleria* spp.; and

(ii) Elevations between 663 and 1,622 m (2,175 and 5,321 ft).

### FAMILY CAMPANULACEAE: *Clermontia pyrularia* (OHA WAI)

Hawaii 1—*Clermontia pyrularia*—a and Hawaii 2—*Clermontia pyrularia*—b, identified in the legal descriptions in paragraph (k) of this section, constitute critical habitat for *Clermontia pyrularia* on Hawaii. Within these units, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

(i) Wet and mesic montane forest dominated by *Acacia koa* or *Metrosideros polymorpha*, and subalpine dry forest dominated by *M. polymorpha*, and containing one or more of the following associated native plant species: *Coprosma* sp., *Dryopteris wallichiana*, *Hedyotis* sp., or *Rubus hawaiiensis*; and

(ii) Elevations between 1,652 and 2,026 m (5,416 to 6,646 ft).

### FAMILY CAMPANULACEAE: *Cyanea hamatiflora* SSP. *carlsonii* (HAHA)

Hawaii 11—*Cyanea hamatiflora* ssp. *carlsonii*—a, Hawaii 14—*Cyanea hamatiflora* ssp. *carlsonii*—b, Hawaii 15—*Cyanea hamatiflora* ssp. *carlsonii*—c, and Hawaii 16—*Cyanea hamatiflora* ssp.

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*carlsonii*—d, identified in the legal descriptions in paragraph (k) of this section, constitute critical habitat for *Cyanea hamatiflora* ssp. *carlsonii* on Hawaii. Within these units, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

- (i) Mesic montane forest dominated by *Acacia koa* or *Metrosideros polymorpha*, and containing one or more of the following associated native plant species: *Athyrium* sp., *Cibotium* spp., *Clermontia clermontioides*, *Coprosma* sp., *Dryopteris* sp., *Hedyotis* sp., *Ilex anomala*, *Myoporum sandwicense*, or *Sophora chrysophylla*; and
- (ii) Elevations between 1,366 and 1,755 m (4,482 and 5,759 ft).

**FAMILY CAMPANULACEAE: *Cyanea platyphylla* (HAHA)**

Hawaii 3—*Cyanea platyphylla*—a and Hawaii 29—*Cyanea platyphylla*—b, identified in the legal descriptions in paragraph (k) of this section, constitute critical habitat for *Cyanea platyphylla* on Hawaii. Within these units, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

- (i) *Metrosideros polymorpha*-*Acacia koa* lowland and montane wet forests, containing one or more of the following associated native plant species: *Antidesma platyphyllum*, *Cibotium* sp., *Clermontia* spp., *Coprosma* sp., *Cyrtandra* spp., *Hedyotis* sp., *Perrottetia sandwicensis*, *Psychotria hawaiensis*, or *Scaevola* spp.; and
- (ii) Elevations between 615 and 1,082 m (2,017 and 3,551 ft).

**FAMILY CAMPANULACEAE: *Cyanea shipmanii* (HAHA)**

Hawaii 1—*Cyanea shipmanii*—a, Hawaii 30—*Cyanea shipmanii*—b, and Hawaii 30—*Cyanea shipmanii*—c, identified in the legal descriptions in paragraph (k) of this section, constitute critical habitat for *Cyanea shipmanii* on Hawaii. Within these units, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

(i) Montane mesic forest dominated by *Acacia koa*-*Metrosideros polymorpha* and containing one or more of the following associated native plant species: *Cheirodendron trigynum*, *Ilex anomala*, or *Myrsine lessertiana*; and

- (ii) Elevations between 1,629 and 2,025 m (5,345 and 6,645 ft).

**FAMILY CAMPANULACEAE: *Cyanea stictophylla* (HAHA)**

Hawaii 15—*Cyanea stictophylla*—a, Hawaii 16—*Cyanea stictophylla*—b, Hawaii 24—*Cyanea stictophylla*—c, and Hawaii 30—*Cyanea stictophylla*—d, identified in the legal descriptions in paragraph (k) of this section, constitute critical habitat for *Cyanea stictophylla* on Hawaii. Within these units, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

- (i) *Acacia koa* or wet *Metrosideros polymorpha* forests, containing one or more of the following associated native plant species: *Cibotium* sp., *Melicope* spp., or *Urera glabra*; and
- (ii) Between elevations of 1,056 and 1,917 m (3,466 and 6,288 ft).

**FAMILY CAMPANULACEAE: *Delissea undulata* (NCN)**

Hawaii 10—*Delissea undulata*—a and Hawaii 10—*Delissea undulata*—b, identified in the legal descriptions in paragraph (k) of this section, constitute critical habitat for *Delissea undulata* on Hawaii. Within these units, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

- (i) Dry cinder cones and open *Metrosideros polymorpha* and *Sophora chrysophylla* forest, and containing one or more of the following associated native plant species: *Acacia koa*, *Diospyros sandwicensis*, *Dodonaea viscosa*, *Nothocestrum breviflorum*, *Psychotria* spp., *Santalum paniculatum*, or *Sophora chrysophylla*; and

- (ii) Elevations between 893 to 1,734 m (2,928 to 5,690 ft).

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### FAMILY CARYOPHYLLACEAE: *Silene hawaiiensis* (NCN)

Hawaii 25—*Silene hawaiiensis*—a and Hawaii 27—*Silene hawaiiensis*—b, identified in the legal descriptions in paragraph (k) of this section, constitute critical habitat for *Silene hawaiiensis* on Hawaii. Within these units, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

(i) Weathered lava or variously aged lava flows and cinder substrates in montane and subalpine dry shrubland containing one or more of the following associated native plant species: *Dodonaea viscosa*, *Leptecophylla tameiameiae*, *Metrosideros polymorpha*, *Rumex giganteus*, *Sophora chrysophylla*, or *Vaccinium reticulatum*; and

(ii) Elevations between 1,022 and 2,413 m (3,352 and 7,915 ft).

### FAMILY CONVOLVULACEAE: *Bonamia menziesii* (NCN)

Hawaii 10—*Bonamia menziesii*—a, identified in the legal description in paragraph (k) of this section, constitutes critical habitat for *Bonamia menziesii* on Hawaii. Within this unit, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

(i) Dry forest, containing one or more of the following associated native plant species: *Argemone glauca*, *Canavalia hawaiiensis*, *Chenopodium oahuense*, *Diospyros sandwicensis*, *Dodonaea viscosa*, *Erythrina sandwicensis*, *Metrosideros polymorpha*, *Myrsine lanaiensis*, *Nototrichium sandwicense*, *Osteomeles anthyllidifolia*, *Peperomia blanda* var. *floribunda*, *Pouteria sandwicensis*, *Psilotum nudum*, *Santalum paniculatum*, *Sapindus saponaria*, *Senna gaudichaudii*, *Sida fallax*, *Sophora chrysophylla*, or *Xylosma hawaiiense*; and

(ii) Elevations between 492 and 697 m (1,614 and 2,285 ft).

### FAMILY CUCURBITACEAE: *Sicyos alba* (ANUNU)

Hawaii 30—*Sicyos alba*—a, identified in the legal description in paragraph (k) of this section, constitutes critical

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habitat for *Sicyos alba* on Hawaii. Within this unit, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

(i) *Metrosideros polymorpha-Cibotium glaucum* dominated montane wet forests, containing one or more of the following associated native plant species: *Astelia menziesiana*, *Athyrium microphyllum* and other ferns, *Broussaisia arguta*, *Cheirodendron trigynum*, *Coprosma* sp., *Cyanea tritomantha*, *Cyrtandra lysiosepala*, *Perrottetia sandwicensis*, *Platydesma spathulata*, *Pritchardia beccariana*, *Psychotria* sp., or *Stenogyne* sp.; and

(ii) Elevations between 966 and 1,546 m (3,170 and 5,072 ft).

### FAMILY CYPERACEAE: *Mariscus fauriei* (NCN)

Hawaii 19—*Mariscus fauriei*—a, identified in the legal description in paragraph (k) of this section, constitutes critical habitat for *Mariscus fauriei* on Hawaii. Within this unit, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

(i) *Diospyros sandwicensis-Metrosideros polymorpha-Sapindus saponaria* dominated lowland dry forests, often on a lava substrate, and containing one or more of the following associated native plant species: *Myoporum sandwicense*, *Osteomeles anthyllidifolia*, *Peperomia blanda* var. *floribunda*, *Psydrax odorata*, *Rauvolfia sandwicensis*, or *Sophora chrysophylla*; and

(ii) Elevations between 278 and 342 m (913 and 1,123 ft).

### FAMILY EUPHORBIACEAE: *Flueggea neowawraea* (MEHAMEHAME)

Hawaii 17—*Flueggea neowawraea*—a and Hawaii 18—*Flueggea neowawraea*—b, identified in the legal descriptions in paragraph (k) of this section, constitute critical habitat for *Flueggea neowawraea* on Hawaii. Within these units, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

(i) Mesic *Metrosideros polymorpha* forest, containing one or more of the following associated native plant species:

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*Antidesma platyphyllum*, *Antidesma pulvinatum*, *Diospyros sandwicensis*, *Nephrolepis* spp., *Nestegis sandwicensis*, *Pipturus albidus*, *Pisonia* spp., *Pittosporum hosmeri*, *Psychotria hawaiiensis*, or *Psydrax odorata*; and

(ii) Elevations between 499 and 818 m (1,637 and 2,684 ft).

**FAMILY FABACEAE: *Sesbania tomentosa* (OHAI)**

Hawaii 20—*Sesbania tomentosa*—a and Hawaii 23—*Sesbania tomentosa*—b, identified in the legal descriptions in paragraph (k) of this section, constitute critical habitat for *Sesbania tomentosa* on Hawaii. Within these units, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

(i) Open, dry *Metrosideros polymorpha* forest with mixed native grasses, *Scaevola taccada* coastal dry shrubland on windswept slopes, and weathered basaltic slopes, and containing one or more of the following associated native plant species: *Dodonaea viscosa*, *Fimbristylis hawaiiensis*, *Ipomoea pes-caprae*, *Jacquemontia ovalifolia* ssp. *sandwicensis*, *Leptecophylla tameameiae*, *Melanthera integrifolia*, *Myoporum sandwicense*, *Sida fallax*, *Sporobolus virginicus*, or *Waltheria indica*; and

(ii) Elevations between sea level and 922 m (0 and 3,025 ft).

**FAMILY FABACEAE: *Vigna o-wahuensis* (NCN)**

Hawaii 4—*Vigna o-wahuensis*—a, Hawaii 4—*Vigna o-wahuensis*—b, and Hawaii 4—*Vigna o-wahuensis*—c, identified in the legal descriptions in paragraph (k) of this section, constitute critical habitat for *Vigna o-wahuensis* on Hawaii. Within these units, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

(i) *Dodonaea viscosa* lowland dry shrubland, containing one or more of the following associated native plant species: *Chenopodium oahuense*, *Dodonaea viscosa*, *Osteomeles anthyllidifolia*, *Sida fallax*, or *Wikstroemia* sp.; and

(ii) Elevations between 717 and 993 m (2,352 and 3,259 ft).

**FAMILY GESNERIACEAE: *Cyrtandra giffardii* (HAIWALE)**

Hawaii 3—*Cyrtandra giffardii*—a, Hawaii 29—*Cyrtandra giffardii*—b, and Hawaii 30—*Cyrtandra giffardii*—c, identified in the legal descriptions in paragraph (k) of this section, constitute critical habitat for *Cyrtandra giffardii* on Hawaii. Within these units, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

(i) Wet montane forest dominated by *Cibotium* sp. or *Metrosideros polymorpha*, and *Metrosideros polymorpha*-*Acacia koa* lowland wet forests, and containing one or more of the following associated native plant species: *Astelia menziesiana*, *Diplazium sandwichianum*, *Hedyotis terminalis*, *Perrottetia sandwicensis*, or other species of *Cyrtandra*; and

(ii) Between elevations of 654 and 1,440 m (2,146 and 4,723 ft).

**FAMILY GESNERIACEAE: *Cyrtandra tintinnabula* (HAIWALE)**

Hawaii 3—*Cyrtandra tintinnabula*—a and Hawaii 29—*Cyrtandra tintinnabula*—b, identified in the legal descriptions in paragraph (k) of this section, constitute critical habitat for *Cyrtandra tintinnabula* on Hawaii. Within these units, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

(i) Lowland wet forest dominated by dense *Acacia koa*, *Metrosideros polymorpha*, and *Cibotium* spp. and containing one or more of the following associated native plant species: *Cyrtandra* spp. or *Hedyotis* spp.; and

(ii) Between elevations 641 and 1,391 m (2,102 and 4,565 ft).

**FAMILY LAMIACEAE: *Phyllostegia racemosa* (KIPONAPONA)**

Hawaii 1—*Phyllostegia racemosa*—a, Hawaii 2—*Phyllostegia racemosa*—b, and Hawaii 30—*Phyllostegia racemosa*—c, identified in the legal descriptions in paragraph (k) of this section, constitute critical habitat for *Phyllostegia racemosa* on Hawaii. Within these units, the currently known primary constituent elements of critical habitat

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include, but are not limited to, the habitat components provided by:

- (i) Tree trunks in *Acacia koa*, *Metrosideros polymorpha*, and *Cibotium* sp. dominated montane mesic or wet forests and containing one or more of the following associated native plant species: *Dryopteris wallichiana*, *Rubus hawaiiensis*, or *Vaccinium calycinum*; and
- (ii) Elevations between 1,371 and 1,935 m (4,498 and 6,349 ft).

### FAMILY LAMIACEAE: *Phyllostegia velutina* (NCN)

Hawaii 24—*Phyllostegia velutina*—a and Hawaii 30—*Phyllostegia velutina*—b, identified in the legal descriptions in paragraph (k) of this section, constitute critical habitat for *Phyllostegia velutina* on Hawaii. Within these units, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

- (i) *Metrosideros polymorpha*-*Acacia koa* dominated montane mesic and wet forests containing one or more of the following native plant species: *Athyrium microphyllum* and other native wet forest terrestrial ferns, *Cheirodendron trigynum*, *Cibotium* spp., *Coprosma* sp., *Dryopteris wallichiana*, *Ilex anomala*, *Myrsine lessertiana*, *Pipturus albidus*, *Rubus hawaiiensis*, or *Vaccinium calycinum*; and

- (ii) Elevations between 966 and 1,881 m (3,168 and 6,170 ft).

### FAMILY LAMIACEAE: *Phyllostegia warshaweri* (NCN)

Hawaii 3—*Phyllostegia warshaweri*—a and Hawaii 8—*Phyllostegia warshaweri*—b, identified in the legal descriptions in paragraph (k) of this section, constitute critical habitat for *Phyllostegia warshaweri* on Hawaii. Within these units, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

- (i) *Metrosideros polymorpha* and *Cibotium* montane and lowland wet forest, in which *Acacia koa* or *Cheirodendron trigynum* may co-dominate, and containing one or more of the following associated native plant species: *Antidesma platyphyllum*, *Athyrium sandwicensis*, *Broussaisia arguta*,

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*Clermontia parviflora*, *Coprosma* sp., *Cyanea pilosa*, *Cyanea* spp., *Hedyotis* sp., *Machaerina angustifolia*, *Pipturus albidus*, *Psychotria hawaiiensis*, or *Sadleria pallida*; and

- (ii) Elevations between 681 and 1,411 m (2,234 and 4,629 ft).

### FAMILY LILIACEAE: *Pleomele hawaiiensis* (HALA PEPE)

Hawaii 7—*Pleomele hawaiiensis*—a, Hawaii 10—*Pleomele hawaiiensis*—b, Hawaii 18—*Pleomele hawaiiensis*—c, and Hawaii 23—*Pleomele hawaiiensis*—d, identified in the legal descriptions in paragraph (k) of this section, constitute critical habitat for *Pleomele hawaiiensis* on Hawaii. Within these units, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

- (i) Open aa lava in diverse lowland dry forests and *Metrosideros-Diospyros* lowland dry forest, and containing one or more of the following associated native plant species: *Bidens micrantha* ssp. *ctenophylla*, *Bobea timonioides*, *Caesalpinia kavaiensis*, *Cocculus trilobus*, *Colubrina oppositifolia*, *Diospyros sandwicensis*, *Dodonaea viscosa*, *Erythrina sandwicensis*, *Kokia drynarioides*, *Metrosideros polymorpha*, *Myoporum sandwicense*, *Neraudia ovata*, *Nestegis sandwicensis*, *Nothocestrum breviflorum*, *Nototrichium sandwicense*, *Osteomeles anthyllidifolia*, *Psydrax odorata*, *Reynoldsia sandwicensis*, *Santalum paniculatum*, *Sida fallax*, or *Sophora chrysophylla*; and

- (ii) Elevations between 86 and 892 m (281 and 2,925 ft).

### FAMILY MALVACEAE: *Hibiscadelphus giffardianus* (HAU KUAHIWI)

Hawaii 26—*Hibiscadelphus giffardianus*—a, identified in the legal description in paragraph (k) of this section, constitutes critical habitat for *Hibiscadelphus giffardianus* on Hawaii. Within this unit, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

- (i) Mixed montane mesic forest containing one or more of the following native plant species: *Acacia koa*, *Coprosma rhynchocarpa*, *Dodonaea*

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*viscosa*, *Melicope* spp., *Metrosideros polymorpha*, *Myoporum sandwicense*, *Nestegis sandwicensis*, *Pipturus albidus*, *Psychotria* sp., or *Sapindus saponaria*; and

(ii) Elevations between 1,193 and 1,274 m (3,914 and 4,181 ft).

**FAMILY MALVACEAE: *Hibiscadelphus hualalaiensis* (HAU KUAHIWI)**

Hawaii 10—*Hibiscadelphus hualalaiensis*—a, identified in the legal description in paragraph (k) of this section, constitutes critical habitat for *Hibiscadelphus hualalaiensis* on Hawaii. Within this unit, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

(i) Dry-mesic to dry *Metrosideros* forest on rocky substrate in deep soils and containing one or more of the following native plant species: *Acacia koa*, *Coprosma rhynchocarpa*, *Dodonaea viscosa*, *Melicope* spp., *Metrosideros polymorpha*, *Myoporum sandwicense*, *Nestegis sandwicensis*, *Pipturus albidus*, *Psychotria* sp., or *Sapindus saponaria*; and

(ii) Between elevations 512 and 1,223 m (1,679 and 4,012 ft).

**FAMILY MALVACEAE: *Hibiscus brackenridgei* (MAO HAU HELE)**

Hawaii 10—*Hibiscus brackenridgei*—a, identified in the legal description in paragraph (k) of this section, constitutes critical habitat for *Hibiscus brackenridgei* on Hawaii. Within this unit, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

(i) *Acacia koa* lowland mesic forest containing one or more of the following native plants species: *Reynoldsdia sandwicensis* or *Sida fallax*; and

(ii) Elevations between 649 and 847 (2,130 and 2,779 ft).

**FAMILY PLANTAGINACEAE: *Plantago hawaiensis* (LAUKAHI KUAHIWI)**

Hawaii 24—*Plantago hawaiensis*—a, Hawaii 25—*Plantago hawaiensis*—b, and Hawaii 30—*Plantago hawaiensis*—c, identified in the legal descriptions in paragraph (k) of this section, con-

stitute critical habitat for *Plantago hawaiensis* on Hawaii. Within these units, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

(i) Montane wet sedge land (often in damp cracks of pahoehoe lava) with mixed sedges and grasses, montane mesic forest, dry subalpine woodland, or *Metrosideros polymorpha* and native shrub, and containing one or more of the following associated native plant species: *Acacia koa*, *Coprosma ernodeoides*, *Coprosma montana*, *Dodonaea viscosa*, *Leptecophylla tameiameiae*, *Metrosideros polymorpha*, or *Vaccinium reticulatum*; and

(ii) Elevations between 1,584 and 2,513 m (5,198 and 8,243 ft).

**FAMILY POACEAE: *Ischaemum byrone* (HILO ISCHAEMUM)**

Hawaii 21—*Ischaemum byrone*—a and Hawaii 22—*Ischaemum byrone*—b, identified in the legal descriptions in paragraph (k) of this section, constitute critical habitat for *Ischaemum byrone* on Hawaii. Within these units, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

(i) Coastal wet to dry shrubland, near the ocean, rocks or pahoehoe lava in cracks and holes, and containing one or more of the following associated native plant species: *Fimbristylis cymosa*, or *Scaevola taccada*; and

(ii) Elevations between sea level and 28 m (0 and 91 ft).

**FAMILY PORTULACACEAE: *Portulaca sclerocarpa* (POE)**

Hawaii 27—*Portulaca sclerocarpa*—a, identified in the legal description in paragraph (k) of this section, constitutes critical habitat for *Portulaca sclerocarpa* on Hawaii. Within this unit, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

(i) Weathered Mauna Kea soils, cinder cones, or geologically young lavas, in montane dry shrubland, often on bare cinder, near steam vents, or in open *Metrosideros polymorpha* dominated woodlands, and containing one or

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more of the following associated native plant species: *Dodonaea viscosa*, *Melanthera venosa*, or *Sophora chrysophylla*; and

(ii) Elevations between 941 and 1,634 m (3,087 to 5,360 ft).

### FAMILY RHAMNACEAE: *Colubrina oppositifolia* (KAUILA)

Hawaii 10—*Colubrina oppositifolia*—a and Hawaii 18—*Colubrina oppositifolia*—b, identified in the legal descriptions in paragraph (k) of this section, constitute critical habitat for *Colubrina oppositifolia* on Hawaii. Within these units, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

(i) Lowland dry and mesic forests dominated by *Diospyros sandwicensis* or *Metrosideros polymorpha* and containing one or more of the following associated native plant species: *Bobea timonioides*, *Erythrina sandwicensis*, *Leptecophylla tameameiae*, *Nestegis sandwicensis*, *Nothocestrum breviflorum*, *Nototrichium sandwicense*, *Peperomia* sp., *Pleomele hawaiiensis*, *Psydrax odorata*, *Rauvolfia sandwicensis*, *Reynoldsdia sandwicensis*, or *Sophora chrysophylla*; and

(ii) Elevations between 177 and 927 m (580 and 3,042 ft).

### FAMILY RHAMNACEAE: *Gouania vitifolia* (NCN)

Hawaii 18—*Gouania vitifolia*—a, identified in the legal description in paragraph (k) of this section, constitutes critical habitat for *Gouania vitifolia* on Hawaii. Within this unit, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

(i) Dry, rocky ridges and slopes in dry shrubland or dry to mesic *Nestegis-Metrosideros* forests on old substrate kipuka and containing one or more of the following associated native plant species: *Nephrolepis* spp., *Nestegis sandwicensis*, *Pipturus albidus*, *Wikstroemia phillyreifolia*, or *W. sandwicensis*; and

(ii) Elevations between 536 and 1,020 m (1,757 and 3,346 ft).

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### FAMILY RUBIACEAE: *Melicope zahlbruckneri* (ALANI)

Hawaii 24—*Melicope zahlbruckneri*—a and Hawaii 26—*Melicope zahlbruckneri*—b, identified in the legal descriptions in paragraph (k) of this section, constitute critical habitat for *Melicope zahlbruckneri* on Hawaii. Within these units, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

(i) *Acacia koa-Metrosideros polymorpha* dominated montane mesic forest containing one or more of the following associated native plant species: *Coprosma rhynchocarpa*, *Melicope* spp., *Myoporum sandwicense*, *Nestegis sandwicensis*, *Pipturus albidus*, *Pisonia brunoniana*, *Psychotria hawaiiensis*, *Sapindus saponaria*, or *Zanthoxylum dipetalum*; and

(ii) Elevations between 1,060 and 1,336 m (3,476 and 4,383 ft).

### FAMILY RUTACEAE: *Zanthoxylum dipetalum* VAR. *tomentosum* (AE)

Hawaii 10—*Zanthoxylum dipetalum* ssp. *tomentosum*—a, identified in the legal description in paragraph (k) of this section, constitutes critical habitat for *Zanthoxylum dipetalum* var. *tomentosum* on Hawaii. Within this unit, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

(i) *Metrosideros polymorpha* dominated montane mesic forest, often on aa lava, and containing one or more of the following associated native plant species: *Diospyros sandwicensis*, *Myrsine* sp., *Pouteria sandwicensis*, *Psychotria* sp., *Reynoldsdia sandwicensis*, *Santalum paniculatum*, or *Sophora chrysophylla*; and

(ii) Elevations between 874 and 1,208 m (2,867 and 3,964 ft).

### FAMILY SOLANACEAE: *Nothocestrum breviflorum* (AIEA)

Hawaii 5—*Nothocestrum breviflorum*—a, Hawaii 6—*Nothocestrum breviflorum*—b, and Hawaii 10—*Nothocestrum breviflorum*—c, identified in the legal descriptions in paragraph (k) of this section, constitute critical habitat for *Nothocestrum breviflorum* on Hawaii.

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Within these units, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

(i) Lowland dry forest, montane dry forest, or montane mesic forest dominated by *Acacia koa*, *Diospyros sandwicensis*, or *Metrosideros polymorpha* on aa lava substrates, and containing one or more of the following associated native plant species: *Bidens micrantha* ssp. *ctenophylla*, *Caesalpinia kavaiensis*, *Colubrina oppositifolia*, *Delissea undulata*, *Dodonaea viscosa*, *Erythrina sandwicensis*, *Hibiscadelphus hualalaiensis*, *Kokia drynarioides*, *Myoporum sandwicense*, *Osteomeles anthyllidifolia*, *Psydrax odorata*, *Reynoldsia sandwicensis*, *Santalum ellipticum*, *Santalum paniculatum*, or *Sophora chrysophylla*; and

(ii) Elevations between 45 and 1,236 m (146 and 4,055 ft).

**FAMILY SOLANACEAE: *Solanum incompletum* (POPOLO KU MAI)**

Hawaii 10—*Solanum incompletum*—a and Hawaii 11—*Solanum incompletum*—b, identified in the legal descriptions in paragraph (k) of this section, constitute critical habitat for *Solanum incompletum* on Hawaii. Within these units, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

(i) Dry to mesic forest, diverse mesic forest, or subalpine forest, and containing one or more of the following associated native plant species: *Myoporum sandwicense*, *Myrsine lanaiensis*, or *Sophora chrysophylla*; and

(ii) Elevations between 1,185 and 2,169 m (3,887 and 7,115 ft).

**FAMILY URTICACEAE: *Neraudia ovata* (NCN)**

Hawaii 10—*Neraudia ovata*—a and Hawaii 18—*Neraudia ovata*—d, identified in the legal descriptions in paragraph (k) of this section, constitute critical habitat for *Neraudia ovata* on Hawaii. Within these units, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

(i) Open *Metrosideros polymorpha*-*Sophora chrysophylla* dominated lowlands, montane dry forests, or *Metrosideros*-shrub woodland, and containing one or more of the following associated native plant species: *Bidens micrantha* ssp. *ctenophylla*, *Capparis sandwichiana*, *Cocculus orbiculatus*, *Fimbristylis hawaiiensis*, *Myoporum sandwicense*, *Myrsine lanaiensis*, *Myrsine lessertiana*, *Nothocestrum breviflorum*, *Pleomele hawaiiensis*, or *Reynoldsdia sandwicensis*; and

(ii) Elevations between 28 and 1,526 m (93 to 5,005 ft).

**FAMILY VIOLACEAE: *Isodendrion hosakae* (AUPAKA)**

Hawaii 4—*Isodendrion hosakae*—a, Hawaii 4—*Isodendrion hosakae*—b, Hawaii 4—*Isodendrion hosakae*—c, Hawaii 4—*Isodendrion hosakae*—d, Hawaii 4—*Isodendrion hosakae*—e, and Hawaii 4—*Isodendrion hosakae*—f, identified in the legal descriptions in paragraph (k) of this section, constitute critical habitat for *Isodendrion hosakae* on Hawaii. Within these units, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

(i) Cinder cones with montane dry shrubland and containing one or more of the following associated native plant species: *Bidens menziesii*, *Dodonaea viscosa*, *Dubautia linearis*, *Leptecophylla tameameiae*, *Melanthera venosa*, *Osteomeles anthyllidifolia*, *Santalum ellipticum*, *Sophora chrysophylla*, or *Wikstroemia pulcherrima*; and

(ii) Elevations between 717 and 1,242 m (2,352 and 4,074 ft).

**FAMILY VIOLACEAE: *Isodendrion pyrifolium* (WAHINE NOHO KULA)**

Hawaii 12—*Isodendrion pyrifolium*—a and Hawaii 13—*Isodendrion pyrifolium*—b, identified in the legal descriptions in paragraph (k) of this section, constitute critical habitat for *Isodendrion pyrifolium* on Hawaii. Within these unit, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

(i) Lowland dry forests containing one or more of the following native plant species: *Myoporum sandwicense*,

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*Psydrax odorata*, *Sida fallax*, *Sophora chrysophylla*, or *Waltheria indica*; and  
(ii) Elevations between 29 and 128 m (94 and 420 ft).

(2) Ferns and allies.

### FAMILY ASPLENIACEAE: *Asplenium fragile* VAR. *insulare* (NCN)

Hawaii 24—*Asplenium fragile* var. *insulare*—a, identified in the legal description in paragraph (k) of this section, constitutes critical habitat for *Asplenium fragile* var. *insulare* on Hawaii. Within this unit, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

(i) *Metrosideros polymorpha* dry montane forest; *Dodonaea viscosa* dry montane shrubland; *Myoporum sandwicense*-*Sophora chrysophylla* dry montane forest; *Metrosideros polymorpha*-*Acacia koa* forest; or subalpine dry forest and shrubland with large, moist lava tubes (3.05 to 4.6 m (10 to 15 ft) in diameter), pits, deep cracks, and lava tree molds that have at least a moderate soil or ash accumulation or that are at the interface between younger aa lava flows and much older pahoehoe lava or ash deposits with a fairly consistent microhabitat (areas that are moist and dark); and containing one or more of the following associated native plant species: *Leptecophylla tameiameiae*, *Phyllostegia ambigua*, *Vaccinium reticulatum*, mosses, or liverworts; and  
(ii) Elevations between 1,313 and 2,194 m (4,306 and 7,198 ft).

### FAMILY ASPLENIACEAE: *Diellia erecta* (ASPLENIUM-LEAVED DIELLIA)

Hawaii 17—*Diellia erecta*—a and Hawaii 18—*Diellia erecta*—b, identified in the legal descriptions in paragraph (k) of this section, constitute critical habitat for *Diellia erecta* on Hawaii. Within these units, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

(i) *Metrosideros polymorpha*-*Nestegis sandwicensis* lowland mesic forest containing one or more of the following associated native plant species: *Antidesma platyphyllum*, *A. pulvinatum*, *Diospyros sandwicensis*, *Microlepia* sp.,

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*Nephrolepis* spp., *Nestegis sandwicensis*, *Psydrax odorata*, *Wikstroemia phillyreifolia*, or *Wikstroemia sandwicensis*; and  
(ii) Elevations between 510 and 981 m (1,672 and 3,217 ft).

### FAMILY GRAMMITIDACEAE: *Adenophorus periens* (PENDENT KIHI FERN)

Hawaii 28—*Adenophorus periens*—a, identified in the legal description in paragraph (k) of this section, constitutes critical habitat for *Adenophorus periens* on Hawaii. Within this unit, the currently known primary constituent elements of critical habitat include but are not limited to, the habitat components provided by:

(i) Epiphytic on *Metrosideros polymorpha* or *Ilex anomala*, or possibly other native tree trunks, in *Metrosideros polymorpha*-*Cibotium glaucum* lowland wet forest containing one or more of the following associated native plant species: *Broussasia arguta*, *Cheirodendron trigynum*, *Cyanea* sp., *Cyrtandra* sp., *Dicranopteris linearis*, *Freycinetia arborea*, *Hedyotis terminalis*, *Labordia hirtella*, *Machaerina angustifolia*, *Psychotria hawaiiensis*, or *Psychotria* sp.; and  
(ii) Elevations between 675 and 921 m (2,215 and 3,021 ft).

[68 FR 9241, Feb. 27, 2003, as amended at 68 FR 13055, Mar. 18, 2003; 68 FR 26038, May 14, 2003; 68 FR 28072, May 22, 2003; 68 FR 36080, June 17, 2003; 68 FR 39704, July 2, 2003; 77 FR 57767, Sept. 18, 2012]

## Subpart J—Manatee Protection Areas

SOURCE: 44 FR 60964, Oct. 22, 1979, unless otherwise noted.

### § 17.100 Purpose.

This subpart provides a means for establishing manatee protection areas without waters under the jurisdiction of the United States, including coastal waters adjacent to and inland waters within the several States, within which certain waterborne activities will be restricted or prohibited for the purpose of preventing the taking of manatees.